THE MEDICAL NEWS.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

VOL. LXXI. NEW YORK, SATURDAY, OCTOBER 2, 1897. NO. 14.

ORIGINAL ARTICLES.

RACIAL DETERIORATION: THE INCREASE OF SUICIDE.[1]

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THE suicide record of the United States since 1890, according to recent statistics, stands as follows: 1890, 2040; 1891, 3531; 1892, 3860; 1893, 4436; 1894, 4912; 1895, 5750; 1896, 6520. The census of 1880 furnishes us with the number of suicides in that year—2511, but as far as I can ascertain, the census of 1890 contains no information upon the subject, the word "suicide" having been omitted from the index of Part 4 of volume 50. However difficult it may be to obtain accurate statistics, it appears certain that in each 100,000 deaths from specified causes, 253 in 1860 were due to suicide, 273 in 1870, and 331 in 1880. These figures, however, give no idea of the actual number of persons who voluntarily ended their existence during the years named; they merely tell us of the number of cases of suicide which were discovered. How many suicides are lost annually to the statistician, no man can say, and I refrain from speculating upon the subject. Statistics of unsuccessful attempts at suicide are obviously unobtainable.

Is suicide increasing in the English-speaking world? I do not find any difficulty in answering this question in the affirmative, although my statistics are very incomplete. Some of my figures are taken from Great Britain. In 1864, in England and Wales, the suicide-rate was 61 to the million persons living; in 1888 it was 81 per million—an increase of one-third (33 per cent.) in less than 25 years. This steady increase is also present in this country. In Massachusetts in the 30 years, 1860 to 1890, self-destruction rose from 69.9 to 90.9 per million living; and in Connecticut from 60.6 to 103.3 per million living. Reliable statistics of suicide in the States of New York and Pennsylvania—if they exist—are not at my disposal.

Admitting then, that self-destruction is on the increase, what, I ask, is the cause of it? The degeneration of the human race, of which the suicidal impulse is a sign, is the result of the many deteriorating influences inseparable from what we call "civilization," together with those which are the outcome of vice. Among the former may be mentioned want of fresh air, improper food and clothing, premature child-bearing, and unhealthy occupations. These, in themselves, are most injurious to the well-being of the race, but when the degenerating influences of alcohol, tuberculosis, and syphilis are added a combination results which the human organism cannot long resist. In an interesting work, entitled "Degeneration among Londoners," an assertion appears, the truth of which nobody will doubt, that the London poor do not survive beyond three, or at most, four generations. If, however, any expert opinion is necessary to corroborate my statement that self-destruction increases with civilization, I append the words of Morselli, *viz.*: "The certainty of the figures and the regularity of the progressive increase of suicide, from the time when statistics were first collected to now, is such, and so great, even in respect to countries different in race, religion, and number of inhabitants, that it is not possible to explain it otherwise than as an effect of that universal and complex influence to which we give the name of civilization."

The reasons I have given for the degenerating influences of civilization are not altogether applicable to the better-educated classes, but as suicide, insanity, and epilepsy are found among the rich as well as among the poor, the causes of this condition must be sought for. In the first place, if a person is financially and socially eligible for marriage, whether his mother was a lunatic or his brother an idiot, is not regarded as a matter of any importance whatever. While the "educated" classes are quite familiar with some of the laws of heredity, and apply them to the breeding of their dogs, they wilfully ignore the best interests of the human race by the incessant propagation of the unfit. Having money at their command, they endeavor, with the aid of the medical profession, to preserve their degenerated offspring from the natural results of the cosmic process. Never in the history of the world was there a time when such strenuous efforts were made to prolong the lives of the absolutely unfit that they might have an opportunity of reproducing their kind; never was there a race which suffered as the English-speaking race is now suffering from the fertility of the worst specimens of humanity.

[1] Read before the Economic Section of the American Association for the Advancement of Science, Detroit, Mich., August, 1897.

With each generation the vitality of the community is being reduced by its manner of life, and in order to enable it to continue the fight against the inevitable laws of nature, all sorts of artificial aids have been invented. False teeth, spectacles, ear-trumpets, wigs, to say nothing of predigested foods, are a few of the contrivances with which we are trying to carry out the pernicious doctrine of the survival of the unfittest. Further, luxurious excess and the numerous vices of the rich all tend toward racial decay. One word more before I leave this point. The Indian is less civilized than the negro. Suicides among the latter are about eighteen times as numerous as among the former. The white man is far more civilized than the negro. Self-destruction is ten times more frequent in the white race than among the colored population.

By "civilization" we mean, for example, that we are able to dine in New York and to breakfast at Buffalo. We profess to "rest" upon a train which moves at the rate of fifty-five miles an hour; and many of us are foolish enough to expect to be fit for work upon rising from our moving bed. Moreover, the modern vacation is so arranged that it will be almost as exhausting as the average business day. "It is the pace that kills," is an old saying, and it is a very true one. The average nervous system is unable to bear the strain of this pace. Some give up the struggle and retire to the lunatic asylum. Others fight to the premature end, bringing forth a new generation, bearing in every organ the signs of the unnatural life which the parents have lived. From this new generation spring many of our lunatics, criminals, and suicides. In two generations more idiots and deaf-mutes make their appearance. But this condition does not extend indefinitely, for we have not succeeded in counteracting the process of natural selection, and three generations later, the degenerated family is probably sterile.

It is now well-recognized that suicide, insanity, and epilepsy are all signs of family decay. Many alienists have, by following the family history of suicides, been able to demonstrate not only that suicide frequently occurs in some families, but also that, while remaining dormant in one generation, it reappears in the next. How long it will be before we admit that the congenital tuberculous diathesis is a sure sign of a degenerative change in the human organism, I cannot tell, but there is to my mind, abundant statistic evidence that such is the case.

The result of the various abnormal conditions of the constitution to which I have referred is the increase of lunacy, idiocy, instinctive criminality, and habitual inebriety. Are these evils increasing out of all proportion to the increasing strain of modern life? I think so. Within recent years there has been a tendency, especially in this country, to push women into competition with men in practically every walk of life. The system has not, however, been long enough in operation to have affected the suicidal rate, although it has increased the amount of dementia paralytica and instinctive crime among the female sex. That, in course of time, the female death-rate from suicide will likewise increase is unquestionable. Perhaps it would be well to look at all the facts. Among all nations, ancient and modern, suicide has been much more frequently practised by men than by women. The usual ratio is and always has been about three or four males to one female, and out of the 6520 persons who voluntarily ended their lives in the United States in 1896, 5078 were men and 1442 were women. As might be expected, the rate of self-destruction varies in different countries. In Switzerland, for example, out of every hundred suicides only 12.2 are females, while in England, the rate appears to be for males 104 annually to every million men living, and for females, only 41 per million women living. Spain has, when the sexes are taken together, the lowest suicide-rate of all European countries, but when women alone are taken the rate is about 28.10 per one hundred. The explanation of this phenomenon is, I think, to be found in the two facts that love, hate, and jealousy are less curtailed by Spaniards than by any other nation, and that these passions play a far more important part in the lives of the so-called "weaker" sex than they do in the lives of men.

In the Australian colonies, the female suicide-rate is low as compared with the male. This is what we should expect in a country where women are scarce, and being much sought after, are kindly treated. In Scotland, upon the other hand, the female suicidal rate is higher than in most other countries, the probable reason being that the illegitimate birth-rate is high, a condition which is productive of an unlimited amount of misery and despair among the mothers of the bastard children.

The comparative immunity of the female sex to self-destruction is partly dependent upon the less harassing position which woman has, up to now, taken in the struggle for existence; partly upon the less vicious life which she usually leads, and partly upon her natural repugnance to personal violence and mutilation of the body. In England, at one period of life, the suicidal rate among females not only equals but actually exceeds that of the males. This is during the 15-to-20-years-of-age period, and it is to be accounted for by the severe constitutional change experienced by women at this time. The English statistics show also an increase of female sui-

cides during the 44-to-55-years-of-age period, due, of course, to the climacteric.

The death-rate from the results of drinking alcoholic liquors is probably on the increase. Nevertheless, drinking is becoming less general, for it is now more narrowly confined to the habitual drunkard, who is, in the majority of cases, the victim of hereditary predisposition, than it was fifteen years ago. Thus, though the evil is as virulent as it ever was, its field of action is smaller, the acquired form of inebriety being somewhat less common than it was in the days of yore. As far as the race is concerned, the change is for the better. The conclusion that must be drawn from the evidence is that intemperance is only responsible for a small part of the increase of suicide.

The evil effects arising from the advance of civilization are great, yet improved sanitation must, to some extent, have neutralized them. That being so, the increased severity of the struggle for life cannot be regarded as the *causa vera* of the addition to the suicide death-rate. To what then must the increase be attributed? The answer is to heredity, and to the fertility of the degenerated portion of the community. Suicide is frequently interchangeable in transmission with other diseases, especially diseases of the nervous system. Every alienist is aware of this, and it would be mere waste of time to quote the words of any one of them, or to give the history of families in which suicide has occurred several times. I have before me the statistics of the death-rate in England from 1866 to 1890, from which the following facts are taken:

Cause of Death.	Increase per cent. in 25 years.
Cancer	75.5
Nervous diseases	10.2
Premature birth	26.5
Diabetes	103.1
Other kidney diseases	63.4
Heart diseases	65.9
Intemperance	59.0
Congenital malformation	21.5
Other constitutional diseases	118.7

The death-rate (in England) from pulmonary tuberculosis shows a decrease of 35.3 per cent., but the process of natural selection has been producing a decrease in the deaths from this disorder for (in English cities and towns) some 75 years. That there has been any appreciable increased rate of decrease since the discovery of the Koch bacillus in 1882 is not shown by any statistics that I have been able to discover. As tuberculous diseases still furnish 12 per cent. of all the deaths in England, it is evident that those predisposed to consumption are not abstaining from the reproduction of children, many of whom die insane, and some of whom die of cancer. The extreme contagionists make a great deal of noise, but they appear to forget that a congenital consumptive is a true degenerate, both mental and physical, and that the bacillus tuberculosis is the benefactor of the race if it removes him before he has succeeded in adding to the degenerate population. If, however, the contagionists would find some large city where the death-rate from phthisis shows a marked additional rate of decrease since 1882, their "antiseptiphobic" clamor might receive some serious attention. The bacillus tuberculosis does not attack persons in normal health, and it has a special predilection for the insane.

The question of nativity in reference to suicides in America is, perhaps, of some importance, since the uninitiated attribute always every mark of degeneration to "the foreign-born element."[1] To obtain accurate figures upon any subject, outside of industrial questions, is, in this country, practically impossible. The numerous officials who are appointed or elected by the various States, having received positions as a reward for political services, are not interested in statistics, even if they are competent to compile them. The collection of figures once in a decade for the Federal Census is quite insufficient, and the volumes containing the information take years to reach the public libraries. A portion of the Census of 1890 is not yet (July, 1897) ready! A permanent United States Registrar of Statistics, with a competent staff, which ought to be absolutely outside the interference of the politicians—if such a condition is possible—is urgently needed.

The following figures relate to New York City. As far as I can judge, however, they furnish a fairly accurate index to the nativity of the suicides all over the country.

	1892.	1893.	1894.	1895.	1896.
Total number of suicides: Nativity.	241	314	331	376	384
1. Germany	105	127	122	130	126
2. United States	57	81	100	108	109
3. Ireland	17	26	20	19	21
4. All others	62	80	89	119	128

While I should like to believe that an American nation is being produced which is superior to that inhabiting any other land, I do not find any signs of it in the statistics of self-destruction among the native-born in New York City. It is possible, of course, that suicide may be most common among the children of foreign-born parents, but such evidence as I have been able to obtain seems to show that the American system of living at "high pressure"—the haste to become rich—is not conducive to racial progress.

To sum up: Suicide does not appear to any ap-

[1] It is the fashion to speak of "Americans" as if there existed an American race, the prevalent idea being that, when three generations have been born in the United States, the "race" has been established.

preciable extent among savages, but is a product of civilization; it depends chiefly upon some constitutional depravity, as is shown by its emanation from bad stock, by the hereditary character of the predisposition toward it, and by the fact that in transmission it is very often handed down exactly as are other pathologic variations depending upon constitutional degeneration.

The time at my disposal compels me to devote the remainder of my paper to an attempt to answer the question, How can the brake be applied to racial deterioration, as evidenced by the increase of suicide? I do not wish it to be supposed that all members of every family in which epilepsy, idiocy, insanity, or suicide has occurred are so degenerate as to be unfitted to reproduce their species. Such families, however, must be regarded with suspicion. Other symptoms of decay should be looked for, and if they are, they will frequently be found. The first question to ask is, Does phthisis "run in the family?" or, to use scientific language, Does each generation inherit the tuberculous diathesis, and transmit it to its successor? The ebb of the tide of vitality of the family, and the danger to the race, must be estimated by the sum of the imperfections which are to be met with in the family history.

The appearance of nervous disorders usually proves that a tendency to decay has presented itself in a family; when suicide has also appeared the decay has actually begun. If such a family is to exist for more than three or four generations, an attempt must be made to increase its vitality by the infusion of untainted blood and by attention to the laws of health. I am not sanguine as to the results of these methods, because I do not believe that acquired characteristics are inherited, nor am I convinced of our ability to "breed out" pathologic variations. There is, nevertheless, a process by which the regeneration of the race may be accomplished, *viz.:* by artificial selection in reference to marriage. If those who are abnormal would refrain from the reproduction of the species, the problem would be solved. In my opinion it is our duty to teach that the markedly unfit should not propagate their kind. Of course, we ought to care for the weak and the suffering, but that any individual having a constitutional disorder should contaminate the race and increase suffering and misery by propagating his unfitness is, from a scientific standpoint, unpardonable. Careful and deliberate cultivation of all that is worst in humanity, as exemplified by the lunatics, the epileptics, the scrofulous idiots, the instinctive criminals, the deaf-mutes, the habitual drunkards and the suicides, is largely responsible for the condition in which we find the English-speaking world to-day; and unless we make a serious attempt to teach the principles of general evolution to our boys and girls, no improvement can be expected. The time has arrived when physicians should speak out; the cure of disease may be a very good thing in its way, but the reduction of it by means of celibacy upon the part of the unfit would be of much greater benefit to the community at large.

THE PRESENT STATUS OF PRACTICAL ORTHOPEDICS.[1]

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For convenience the commoner affections which tend to cripple the framework of the body may be divided into the following classes: (1) Those due to anomalies of development. (2) Those due directly to violence. (3) Those due to pressure or overloading, commonly of weakened structures. This class may be subdivided into the rachitic and non-rachitic. (4) Those depending upon functional or organic nervous disease. (5) Those depending upon some pathologic process in or about a joint, or about the spinal column.

In the treatment of developmental deformities the indications are to correct malpositions, to restore the parts to their normal relations, and, while preventing relapse, to strengthen them by use within normal limits. Of the many congenital deformities only two need here be considered—pes equino-varus, on account of its frequent occurrence, and congenital hip luxation, on account of recent progress in its treatment.

In the case of ordinary clubfoot, treatment by manipulation should begin at once, and in the mildest cases this may suffice; in most, however, the bulk of the work will have to be done through mechanical correction. Whatever the means employed, the varus element should be first corrected, afterward the equinus. Many of the younger cases will do well under frequent applications of plaster of Paris, increasing the correction a little at each sitting. A very satisfactory method is to force the foot outward by a straight Judson brace, afterward correct the equinus, and retain by a Taylor brace; or the latter may be used from the start. The main point is to persist until the deformity is thoroughly overcorrected; after which the foot must be retained and used in this position until there is no tendency to relapse. The patient must be kept under observation for from one to several years. Relapses and unsatisfactory results are nearly always due to imperfect correction, or to too short a period of retention. If the case lags and

[1] Read before the Northwestern Medical and Surgical Society of New York.

ceases to progress under the plan of gradual molding or unfolding of the foot, resort should be had to forcible manipulation under an anesthetic, the massage to continue for from five to ten minutes or until the foot, taken between two fingers, falls readily into the overcorrected position. Tenotomies of the heel-cord and plantar fascia should be performed if necessary to complete reduction. This is a very successful procedure and often saves a great deal of time; it is ineffectual unless followed by thorough after-treatment. Severe operations on the bones or soft parts are rarely necessary when the above plan is faithfully carried out in children under six or seven years of age. In the obstinate deformities of adolescents and adults, very fair correction may be obtained at one or two sittings by means of special apparatus, such as the Bradford adjuster, combined with tenotomy, and followed by proper after-treatment. There is no more satisfactory class of cases; when seen early, all should be cured, and the old and neglected cases are capable of great improvement.

Congenital luxation of the hip may be due to defective development of the acetabulum or to a traumatism at or before birth. A few cases of cure from prolonged traction have been reported, but until operative reposition was begun by Hoffa and improved by Lorenz not much advance was made. Considerable success has followed the improved operation, which has been done over two hundred times by Lorenz. In the meantime, Paci of Milan brought forward a method of reduction by manipulation, which has recently been improved by Lorenz, and he claims very good results in appropriate cases. His procedure is as follows: The leg is brought down into a position of complete extension with abduction by very strong traction until the trochanter is at or below Nélaton's line. The thigh is then flexed to 90°, rotated slighted inward, and abducted to 90°, which jumps the head of the femur over the rim and into the acetabulum with a sound and a shock. The thigh is retained in strong abduction by means of a plaster spica extending to the knee, in order to prevent recurrence, and the patient is soon encouraged to walk with a high patten on the well side in order to mold the acetabulum. At subsequent dressings the abduction is lessened, and after six months or so the patient may walk with an inch extra sole on the well side. Reduction by this method has been performed one hundred times; it is applicable to the younger and unilateral cases. It is too recent for us to judge of the ultimate results, but it offers very great encouragement in this difficult class of cases.

Omitting, on account of lack of time, those deformities due to trauma, we take up the large and important group of pressure deformities, where, owing to excess of load or, more often, to deficiency of resisting power, some part of the body framework yields and becomes deformed. This group includes flatfoot, weak ankles, bow-legs, anterior curve of the tibia, coxa vara, pigeon-breast, round shoulders, and lateral curvature of the spine. Nearly all of these deformities may be due to rickets, but they are very frequently due to other causes. Any condition which interferes with nutrition and vigor tends to laxity of fiber, and may result in a deformity of that part which bears the blunt of the load, especially during the period of rapid growth. The principles of treatment are to improve nutrition and muscular strength, and to mechanically shift the incidence of the load, so that it shall act as a correcting force, or when that is not possible, to rapidly correct the deformity by a surgical operation.

In bow-legs the tibiæ are curved outward, or outward and forward, and the femora and knee-joints may contribute to augment the deformity. Relaxation of the external lateral ligaments of the knee-joints and pigeon-toes often accompany bow-legs. A certain amount of bandy-leggedness is natural to some infants, and this is often aggravated by allowing the child to walk when too young. In mild cases occurring in very young children the legs should be manipulated, and standing and walking limited. In mild cases of longer duration the outer side of the shoe in addition should be built up one-quarter of an inch. When this is not sufficient, and the patient is under four or five years of age, brace correction must be employed, the Knight brace being a good one for this purpose. Most of the mild and moderate cases may be cured by these means. In older patients, or in more obstinate cases, the tibia may be broken or chiseled and the deformity forcibly corrected. The operation usually performed in New York is a subcutaneous osteotomy at the point of greatest curvature of the tibia, which is usually at the junction of the lower and middle thirds. This operation is simple, is not severe, and with proper after-treatment usually cures the deformity.

Anterior curvature of the tibia is much more difficult to treat, and in very bad cases a cuneiform osteotomy is indicated. In both of these affections there is, in the milder cases, considerable tendency to spontaneous improvement, and in cases in which the deformity is arrested, natural growth will improve the shape of the parts.

Knock-knees show much less tendency to self-correction; relaxation of the internal lateral ligament of the knees, weak ankles, and valgus, or flatfoot, are frequent accompaniments. In mild cases, walking and standing should be limited, the legs manipu-

lated, and the inner side of the shoes built up one-quarter of an inch. In cases of moderate severity the Thomas knock-knee brace is often effective, while in older patients and in severe cases an operation is indicated, the preferable one being a subcutaneous osteotomy of the femur a finger's breadth above the condyles, either on the inner side (McEwen's operation) or the outer (McCormac's). The deformity is corrected by manual force after partially severing the bone, and a spica bandage is applied and allowed to remain for six weeks; the legs often require further support by braces or plaster. In general, the results are good or fair; partial correction, however, is not uncommon. An angle remains at the point of fracture, where it does no harm and is partially effaced by growth. Unless great care is taken in the after-treatment, recurrence may follow.

Owing to imperfect development and lack of vigor, weak ankles, with more or less abduction and eversion of the feet, are very common in city people, especially women and children. The conventional treatment with stiff-ankled shoes is perfectly futile.

The shoes, natural shape ("Waukenphast"), should be built up on the inner side, and the legs manipulated and exercised, with special reference to strengthening abduction, inversion, and flexion of the foot, and the general health should be improved.

The modern treatment of flatfoot is a notable improvement over that of a few years ago. Through the labors of Whitman and others, it is now recognized that this affection is a partial dislocation, often complicated by subacute inflammation about the pinched or stretched parts. In mild cases with little or no spasm, building up the inner side of the shoe in order to force the patient to bear more weight upon the outer border of the foot, and manipulations and exercises to favor inversion, abduction, and flexion, will often answer. In other cases, strapping the foot in the inverted position with adhesive plaster is of service. In obstinate cases, with considerable pain, spasm, and rigidity, the malposition must be overcome by forcible reduction under the influence of an anesthetic, and the foot put up over-corrected in plaster for three or four weeks. Occasionally, tenotomy of the heel-cord will be required in order to effect a perfect reduction. After the period of retention, a foot-plate should be made over a corrected cast, and the muscles strengtened by massage and special exercises. The results, even in these bad cases, which were formerly practically hopeless, are very good indeed. Comfortable, useful feet are the rule.

Round shoulders, like the other affections of this group, when not rachitic, are usually due to a sedentary life, imperfect development, and lack of vigor. This defect is not confined to the trunk, but is general; weak ankles and flat feet are frequently associated with it. It should be remembered that this distortion primarily is not of the shoulders; it is first of all a sagging of the thorax, with posterior projection from lack of muscular tone, deficient chest expansion, and faulty attitude. The remedy is to correct these conditions by outdoor sports, general and special exercises, and tonic and hygienic treatment. Shoulder-straps and exhortations to throw the shoulders back are equally useless. These cases, especially if of long standing, or combined with considerable rigidity of the spine and thorax, are neither unimportant nor easy to treat. The vitality and endurance of an individual so affected is seriously compromised by his deficient chest capacity and breathing power, and it is well worth while to treat the condition seriously. A country life, or if that is not possible, an approach to the conditions of country life, with systematic special training to expand the chest and develop grace and flexibility of attitude and muscular tone, correction of the malposition, is usually followed by excellent results.

The subject of lateral curvature is easily the most difficult one in orthopedic practice. In spite of the extraordinary amount of ingenuity and study devoted to its elucidation, the best authorities have a very modest feeling in regard to their knowledge of its causation and treatment. This is not to say that many facts are not known regarding it, or that treatment is useless, for that is far from the truth; but the subject remains to be mastered. Lateral curvature is, of course, due to a variety of causes, some of them well understood, but the ordinary or idiopathic cases are here particularly referred to, in which no very obvious cause is apparent. In such cases we are in the habit of attributing the condition to muscular debility and habitual faulty attitudes, and no doubt they are partially to blame for it. Our inability to entirely correct the rigid bony deformity makes it exceedingly important that the mild and beginning cases should be recognized early and seriously treated, and one should not be deluded with the vain hope that it will be outgrown. Many cases are spontaneously arrested, with only a moderate degree of deformity, but we are as yet unable surely to distinguish such cases in their early stages from those that will go on to crippling deformity, unless checked by treatment. The mild and early cases do exceedingly well on tonic and hygienic treatment similar to that proper for round shoulders, with much attention to special corrective exercises and manipulations, and to the regulation of the daily life. It is frequently advisable to interrupt school-going for a

time, and to prescribe short daily periods of recumbency. Piano practice I have found to be specially harmful, and it should always be stopped; singing, on the other hand, is beneficial. Cases of moderate severity, with considerable spinal rigidity require more energetic treatment, and for longer periods; some form of suspension may be used in order to increase spinal flexibility, and for some the pressure frame is useful. Apparatus and jackets are not to be employed unless the curvature is increasing, and this should be determined by accurate measurements from time to time. In these cases of medium severity the health may usually be improved, chest expansion, spinal flexibility, and muscular strength increased, and the attitude and appearance of the patient improved, but a considerable amount of curvature still remains at the end of our labors; in favorable cases, however, this is so slight as to be unnoticed under the clothing. In the bad cases, which get worse in spite of treatment, some kind of supporting apparatus must be worn; this should always be combined with daily developing and corrective exercises. Many of these patients, after a long period of treatment, may be able to dispense with their apparatus, and lead active and useful lives free from suffering and with fairly presentable figures. A few cases, usually those seen late or complicated with paralytic or other serious affections, go on to extreme deformity.

The group of crippling disorders, the seat of which is principally in the nervous system, is a large and important one, but only two need be considered here, namely, poliomyelitis anterior acuta, and the infantile cerebral palsies; these are chosen mainly for the reason that while both affections are essentially incurable, orthopedic treatment is of great benefit. The indications for treatment are to prevent or correct deformity, to improve local circulation and nutrition, and to bring crippled parts into action, while preventing undue strain on weakened muscles and flaccid joints. The problem confronting one in both affections is that of educating, disposing, and correlating intact, or measurably intact, parts in such a way as to fit them for the best service of the individual. On the same principle that the hand in wrist-drop, or the cheek in facial palsy should be supported to prevent the deleterious effects of traction upon palsied muscles, so a drop-foot, or other deformity of the limb, should be forestalled and the muscles allowed to recover their tonicity, so far as they are capable of doing, by the use of proper mechanical appliances. These should always be so arranged as to bring weakened muscles into action; it is the unbalanced pull of the stronger muscles that is to be limited. Much permanent damage may be done by permitting the vitality to be stretched out of muscles which are weakened but still active, by the unopposed drag of gravitation or the unbalanced pull of their antagonists. When seen early, available muscular integrity may be preserved, and serious deformity prevented. Such management gives the greatest effect to efforts to promote local nutrition by electricity, hot air, and massage. Children affected in this way often do great harm to their feet and knees in their efforts to walk unaided, when the adjustment of proper apparatus would be of the greatest benefit. Deformities which have already occurred should be corrected by mechanical or surgical means and relapse prevented.

The operation of tendon-grafting, which has recently come into prominence, is capable of doing considerable good in properly selected cases. It consists in attaching the tendon of an active muscle to that of one which has lost its power. The active tendon may be split, so as to pull upon both its old and its new insertion. The operation of arthodesis, or joint stiffening, has proved only moderately successful in infantile paralysis.

In cerebral palsies contracted tendons should be divided, as tenotomy not only permits the correction of the deformity but to a marked degree allays spasm and tends to restore the muscular balance. This will improve locomotion, and in some cases enable perfectly helpless patients to walk, and at the same time will exercise a happy effect upon the mental condition. When these measures go hand in hand with exercises and training to promote muscular control, marked improvement usually follows in all but the worst cases.

Functional nervous disorders may mimic almost any crippling affection, and often require more skill in their treatment than the disorders they suggest. Many cases of weak, tender, or aching back belong in this category. The condition of the bedfast or semibedridden neurasthenic appeals strongly to our sympathy; these are border-line cases—the treatment of which few care to undertake. I mention them here only to say that I have usually found them very amenable to energetic and systematic treatment.

There is still left the very important group of affections tending to cripple through inflammation or disease of the spinal column, or of one or more of the articulations. These joint troubles may be traumatic, tuberculous, suppurative, rheumatic, gonorrheal, syphilitic, tabetic, or may follow the acute infectious diseases. The indications for their treatment are to eliminate systemic poison when present, to allay pain, build up the system and improve the quality of the blood by the oxygen of the open air, diet, and medicaments, and to arrest

the local morbid process by means of enforced local rest, and the application of fixation and traction splints, with longer or shorter periods of recumbency. While the local process is subsiding, deformity must be prevented or overcome, and the articulation restored, so far as may be, to its proper function. The large majority of tuberculous spines and joints get well under faithful and persistent treatment. Something like ten per cent. of the patients afflicted in this way succumb to the morbid process or to complications. Diseases of the larger joints, when seen early, often recover without serious deformity or interference with function; sometimes without any. In the spine the result is less frequently so favorable. Patients suffering from a more advanced type of the disease in which loss of substance has already occurred, may, and usually do, recover with more or less stiffness, deformity, and disability, but still with very useful members. Those suffering from the worst form, and those in whom the condition is neglected, die, or recover with crippling deformity.

Excision has rather a restricted field in these cases. The results are better at the knee than at the hip. For patients who remain deformed after the cure of their disease, much may still be done to alleviate their condition. In fibrous ankylosis the flexed hip may often be mechanically stretched out, or forced down by careful manipulations. In severe adductions the long median abduction splint has given much satisfaction. If the union is a bony one, the femur may be chiseled below the lesser trochanter (Gant's operation), a procedure giving excellent results. At the knee, Bradford and Goldthwaite's method of forcible mechanical correction gives excellent results in apparently hopeless cases of angular deformity. Where there is bony ankylosis, resort must be had to excision. True pus must be evacuated whether in a joint or in the soft parts, but the collection of tuberculous detritus known as cold abscess does not call for summary treatment. Provided the original lesion is properly treated, the patient will do well, whether the abscess is evacuated or not; he is quite likely to do badly in either case if the diseased joint is neglected. Iodoform-ether and other injections are useful in old sinuses, even when they communicate with bone, but deep injections into the undrained joint or its neighborhood are quite as apt to do harm as good.

Leprosy in North Dakota.—The Surgeon-General of the Marine Hospital Service in Washington has been informed of the existence of two cases of leprosy in Walsh county, North Dakota. The disease is said to be well developed. Both of the patients are Scandinavians.

TYPES OF EDEMA IN INFANCY AND CHILDHOOD.[1]

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EDEMA, developing in early childhood, and especially in infancy, is sufficiently uncommon, as compared with its greater frequency in adults, to render its occurrence a matter of interest, particularly as its etiology is often so very obscure at this time of life. Our attention has been turned in this direction through a series of cases recently under observation, in some of which it was most difficult to determine the true nature of the affection.

In studying edema as presented in early life one's thoughts naturally turn first to the possibility of the presence of nephritis. That this disease may occur in the very young has been amply shown by many writers, notably by Jacobi[2], and by Felsenthal and Bernard.[3] We ourselves have witnessed it repeatedly. Scarlatina is certainly one of its commonest causes, but it is well to remember that other infectious diseases, as measles, erysipelas, malaria, pertussis, diphtheria, and varicella may be accountable for the renal inflammation, and that eczema and other cutaneous eruptions appear to be the cause in occasional instances. Intestinal disease is not infrequently the exciting factor in infants. Often we can discover no cause for the renal disorder, and sometimes we may be able to surmise only; as, for instance, when slight traces of redness or of desquamation indicate that possibly an erysipelas or a scarlatina had previously been present.

That congenital syphilis is capable of producing nephritis and consequent edema is not yet universally admitted, although there are cases on record which appear to prove this with reasonable certainty. Yet these cases are rare. Audeoud,[4] in a recent careful paper, was able to collect but six instances, besides one reported by himself, of what seemed to be undoubted nephritis from congenital syphilis, as judged by the symptoms during life. The cases reported are those of Bradley,[5] Potain,[6] Coupland,[7,8] Massalongo,[9] and Hock.[10] In four cases autopsy confirmed the clinical diagnosis, and in three the evi-

[1] Read at the Twelfth Annual Meeting of the Association of American Physicians, Washington, D. C., May 5, 1897.
[2] *New York Med. Jour.*, lxiii, 65, 1896.
[3] *Arch. für Kinderheilk.*, xvii, 222, 1893.
[4] *Rev. Med. de la Suisse Rom.*, August 20, 1896.
[5] *Brit. Med. Jour.*, i, 116, 1871.
[6] *Gaz. des Hop.*, 1201, 1878.
[7] *Brit. Med. Jour.*, Jan. 31, 1880.
[8] *Transac. Path. Soc.*, xxvii, 303, London, 1875-76.
[9] *Ann. de Derm. et de Syph.*, 1148, 1894.
[10] *Sem. Med.*, 475, 1894; *ibid.*, 99, 1895.

dences of nephritis and of syphilis disappeared under antisyphilitic treatment.

The two following cases observed by us are of interest in this connection:

CASE I.—J. J., two months old, mulatto; seen for the first time January 21, 1897. The father acknowledged no symptoms suggestive of syphilis. The mother was apparently healthy and had had no miscarriages. Three other children were alive and well. When a month old the patient had some sort of erythema, which appears to have been slight and limited in extent. One week before his first visit he developed a bad attack of coryza. On examination, the child was seen to be of fairly healthy appearance. The nostrils were filled with a thick discharge which interfered with respiration. On January 27th, a desquamation was noticed over the hands, feet, face, and forearms. This was of a distinctly peeling character, suggesting scarlet fever; but interrogation of the mother failed to elicit the history of any eruption which would satisfactorily account for the symptom. A flat, macular, pale-red eruption, having all the appearances of syphilis, was present over the nates and especially about the anus and to a less extent over the thighs and about the knees. There was some excoriation about the anus. The nasal discharge was unabated. On January 29th the condition described was practically unchanged, and there was in addition evident edema of the lower extremities, and to a slight degree of the face also. Inunctions of mercurial ointment were ordered. This treatment was changed on February 1st to gray powder, internally, owing to the dermatitis which had been produced. Improvement began and continued slowly. By February 13th, the edema was scarcely noticeable in the face, though still present to some extent elsewhere. The anal excoriations were healing and the rhinitis was much better. By February 16th, the syphilitic eruption had nearly disappeared, and there was no more scaling, but still a little general edema. Examination of the urine made about this time showed quite a thick ring of albumin with Heller's test. Decomposition had advanced too far to permit of finding casts if present, but some leucocytes and small epithelial cells were observed. The child was seen for the last time on February 24th. It was then better in every way, although some rhinitis and edema were still present.

In this instance it seems impossible to determine absolutely whether the cause of the nephritis was syphilis or scarlatina. The whole complex of symptoms, however, and the recovery under antisyphilitic treatment, leave us in little doubt that the nephritis was syphilitic.

The second case appears to be an undoubted instance of syphilitic nephritis, in spite of the failure to procure urine for examination.

CASE II.—Baby R., male, born July 25, 1896. The mother appeared healthy; the father acknowledged having syphilis, and presented symptoms of the disease. The child was small, thin, and weighed but 4¾ pounds. The skin of the feet and hands looked as though blistered, was cracked, and came off like a glove, leaving a raw, bleeding surface. Over the body, but especially on the limbs and around the mouth, nose, and anus was an annular eruption, varying from pin-head to small-pea size. Coryza was present. Mercurial ointment was applied on the binder. On July 27th, the eruption had become pustular, with thick crusts and fissures about the nose, mouth, and anus. Some small aphthous patches were present in the mouth. The child improved slightly, but on August 3d dropsy appeared in the legs, and by the next day involved the lower extremities, face, and abdominal cavity. Under the continued use of mercurial ointment, combined with diuretics, the edema rapidly disappeared, as did the cutaneous symptoms later, and the child steadily improved in health, gaining two pounds by September 4th. It has continued well since that date.

In addition to the causes of nephritis mentioned, there seems no reason why a general septic infection should not produce severe parenchymatous changes in the kidneys. The following case appears to be an instance of septic nephritis: The origin of the infection could not be discovered. All the tissues of the body were examined except the bones, and it is possible that a septic inflammation of these may have existed. The case occurred in the service of Dr. J. C. DaCosta in St. Agnes' Hospital, Philadelphia, where we had the opportunity of seeing it. For the notes of the autopsy we are indebted to Dr. A. O. J. Kelly, pathologist to the hospital.

CASE III.—Eleanor M., born October 10, 1896. Weight 7¾ pounds. Except for slight ophthalmia and coryza, from both of which she recovered promptly, the child was entirely well until December 31st, when feverishness and malaise developed. On January 1, 1897, the evident illness had increased; there was decided pallor, and the right leg from the knee down was swollen, as was also the vulva. The latter was red and angry-looking, yet without the appearance of erysipelas. By January 2d, the edema had extended to the thigh, and on this day or the next a swelling appeared over the left parietal bone. On January 3d, swelling of the left elbow-joint set in.

We saw the child on the morning of January 4th, and found it very ill, seeming to suffer pain and crying weakly if disturbed. It was of a waxy pallor, with a slight icteric hue, and the conjunctivæ were decidedly yellow. On the left parietal prominence was a large projecting swelling, very hard, and the size of a walnut. The eyelids, both upper and lower, were edematous, making the eyes appear deep-set and small. The rest of the face was slightly swollen. The left elbow presented a spindled-shaped swelling, somewhat tender but not red. The right leg and thigh were very edematous throughout, the swelling being tense but without redness. Both external labia were swollen but not discolored. Nothing abnormal could be discovered about the bones of the lower extremities. The ribs were slightly beaded.

Examination of the liver and spleen gave negative results. A stool passed during the examination was formed and almost white. No temperature record was kept. The child died a few hours later. Urine taken from the bladder after death contained about one-sixteenth albumin by bulk, with leucocytes and numerous bacteria, but no casts could be found, the decomposition having doubtless destroyed any which might have been present.

The autopsy showed that the parietal swelling had flattened very much after death. Pus was discharged on incision. The left elbow-joint was very much swollen, the bones being loosely attached and giving a rough sensation when rubbed together. The joint contained pus. The external genitals were much swollen. The right lower extremity was greatly swollen, pitted on pressure, and on incision discharged a clear serous fluid. The crural vessels were normal. The thoracic viscera showed nothing worthy of note except that the heart-muscle was flabby, friable, and yellowish-red in color. Incision of the abdominal cavity revealed an acute general peritonitis with recent adhesions and a seropurulent fluid with flakes of lymph. The spleen was much enlarged, very soft, and dark reddish-brown; the liver enlarged and slightly fatty; the kidneys enlarged, soft, pale-yellowish in color, with reddish areas, and with the cortex thickened. The other abdominal viscera and the internal genitalia were normal. Microscopic examination of the organs showed slight fatty degeneration of the heart-muscle and of the liver. There was general hyperplasia of the elements of the spleen. Many of the epithelial cells of the convoluted tubules of the kidneys had desquamated, and many had lost their outline, and the nuclei stained little if at all.

Children may develop an edema, more or less general, in which no distinct evidence of nephritis exists. For instance, it sometimes happens that erysipelas neonatorum will leave a comparatively extensive dropsy, yet without signs of renal disease. Sometimes scarlet fever is followed by dropsy yet without albuminuria. Quincke[1] refers to an epidemic of scarlet fever occurring in Berlin, described by Phillip, in which anasarca developed in about one hundred cases, and in at least sixty of these no albumin could be discovered in the urine. Goodhart,[2] also, has reported similar cases, and warns against the hasty conclusion that nephritis is not present because there is no albuminuria. Dickinson[3] reports some interesting cases in which no cause whatever could be discovered for the widespread edema, and in which there had certainly been no scarlatina, and no albumin could be found in the urine, yet in which autopsy showed the existence of nephritis.

As in adults, localized edema may occur as the result of pressure upon venous trunks. This is perhaps oftenest due in children to the existence of enlarged bronchial glands. The existence of valvular cardiac disease may produce a general edema in early life. So, too, any state of extreme exhaustion, debility, and anemia may be attended by a marantic edema, during which no albumin may be found in the urine. In our experience, this is proportionately much less common in infants than in adults, if we take into consideration the vast number of instances of marantic states which occur in early life. The causes of this edema at any time of life are the same; *viz.*, a hydremic state of the blood and a tendency for the serum to leak through the vessel walls. Some of the cases have been proved by *post-mortem* examination to be entirely free from renal disease, but in other instances the reverse is true.

In this connection we may refer to the strange disease known as edema neonatorum. As Ballantyne[1] has well pointed out, this is rather a symptom of several conditions than a pathologic entity. But until we understand the matter better it is convenient to classify these conditions together under the one name. As ordinarily described, edema neonatorum usually occurs in very weakly or premature infants. It generally, but not necessarily, begins before the third day of life. It is characterized by low temperature, coldness of the surface, and a widespread edema, which pits on pressure, although with difficulty. The child is apathetic and unable to nurse; the pulse and respiration slow and weak. Death nearly always takes place, but recovery is occasionally observed.

Whether or not edema neonatorum is to be considered identical with sclerema neonatorum, has been, and still is, a much disputed question. Parrot believed them different, and Ballantyne and others share this opinion, while, on the other hand, many describe them as identical or at least as forms of the same affection. There seems, we think, good reason to believe them entirely different, and it is even a question whether sclerema is justly to be classified as an edema of any sort.

Edema neonatorum and sclerema neonatorum are alike in their development in feeble and often in premature infants, in the low temperature present, and in the excessive weakness seen, but in sclerema the skin is hard and will not pit, cannot be pinched up into folds, is often discolored, seems adherent to the subjacent parts and will not exude serum when cut at the autopsy. There is also rigidity of the whole body. It is certain, however, that the two diseases may be associated in the same case, as Parrot states.

Sclerema begins oftenest during the first two

[1] *Berlin. klin. Wochenschr.*, xix, 57, 1882.
[2] *Guy's Hosp. Rep.*, xxvii, 197, 1884.
[3] *Trans. Path. Soc.*, xxi, 255, London, 1870.

[1] *Brit. Med. Jour.*, i, 403, 1890.

weeks of life, but may not develop until later. The induration is limited at first, but spreads rapidly over much of the body. A discoloration of the skin is often present, as already stated. Although often confounded with it, the disease is to be distinguished from scleroderma, which is a chronic, usually localized, and generally not especially dangerous affection of the skin.

Various theories have been advanced to explain the hardening of the skin in sclerema, one being that it depends upon a thickening of the subcutaneous bands of connective tissue. Possibly, also, it is due in part to a solidification of the fat, dependent upon its different constitution in very young children, as claimed by Langer.[1]

The following case of sclerema recently came under our observation:

Case IV.—John C., Italian, fifteen days old. The father and mother and two of their children were living and well. Two other children had died from causes unknown. The patient was said to have been ill for a week with rapid respiration and a cough, and had vomited milk at times. He was taken to one of the Philadelphia hospitals where the diagnosis of pneumonia was made. No careful examination was made of the surface of the body, but slight subconjunctival hemorrhage was noticed. On the same day, or possibly the following day, the child was taken to the Children's Hospital, Philadelphia, where he was admitted February 6, 1897, at about 1 P.M. He was apparently in a dying condition, being cold, stuporous, and pulseless, with corneal reflex scarcely obtainable. The temperature in the rectum was 93.8° F., and the respiration 48. The mother called attention to the hardness of the child's cheeks, which she said she had noticed on that day for the first time. Ecchymotic spots were present on the eyelids, and these, the father maintained, had been there since birth. Discoloration of the nates, resembling bruises, was observed. This, the father insisted, had not been present before the child's visit to the hospital referred to.

The child was at once put to bed and stimulants and external heat employed. After some reaction had occurred, the chest was examined and the physical signs of pneumonia found. At 6 P.M., his temperature was 94° F., and respiration 42. During the night following, the child had a convulsion. We saw it for the first time on the morning of the next day, February 10th, when it presented the following condition: It was evidently extremely ill and lay for the most part perfectly still, with the eyes half closed. Respiration was rapid and shallow, the pulse feeble, the color pale and slightly cyanotic. Slight subconjunctival hemorrhage was present, and some small ecchymotic spots on the eyelids. Both cheeks appeared rather full, and on examination were found to be much thickened and of stony hardness, without the slightest pitting on pressure. There was no discoloration of the parts. Examination of the inside of the cheeks with the finger revealed nothing abnormal. Over the buttocks, lower part of the back, and upper part of the thighs, the tissues exhibited the same indurated condition, with a bluish, and in some places yellowish discoloration, exactly resembling the colors of a bruise a few days old. This bruised appearance was best developed in the neighborhood of the anus. The thighs were hard and rigid, but not discolored except in the upper parts. During the morning of February 10th, his temperature rose to 101° F. (possibly aided by the continued application of heat), he had a few convulsive movements, and died at noon.

No autopsy was allowed. Examination of the surface of the body after death showed that the blue color had faded to a slight extent. A faint bluish discoloration had appeared over a small area near the navel. The induration of all the affected parts was unchanged, except being a little less marked over the nates. The bladder was aspirated to obtain urine for examination, but without success.

Sclerema neonatorum is rare in all parts of the world. We have looked through the medical literature at our command in order to discover the cases reported in America and have found but few. Some of these are of rather doubtful nature, while others are merely referred to in the discussions which took place of some of the papers contributed upon the subject. We have found but five fully detailed cases which exhibit the complex of symptoms usually considered characteristic of the disease. We have epitomized them as follows:

A. H. Robinson (*Arch. of Dermatol.*, viii, 337, 1882): Well-nourished boy, seven months old, had many convulsions during the first day of life and intense jaundice on the third and fourth days. On the second day of life induration appeared over buttocks and extended half way down outer aspect of thighs. Affected skin not unusually pale, and not cooler to touch; moderately edematous. Temperature taken once registered 101° F. Child steadily improving at time of report.

In the discussion of this case, Weisse referred to two instances of the disease seen by him, in one of which the induration began at the back of the neck and extended all over the body and the back of the legs. Both patients recovered. Piffard said he had seen one case. Taylor had seen two cases, both in children two to three weeks old, and both terminating in recovery. The disease extended over the entire body.

In the absence of further details the suspicion is strongly aroused that the cases referred to in the discussion were instances of some form of edema, and not of sclerema.

Ellen A. Ingersoll (*Peoria Med. Monthly*, viii, 240, 1887–8): Mother alcoholic. Boy, well developed at birth. On third or fourth day of life scrotum and anterior surface of thighs became swollen and hard, the skin and subcutaneous tissues being involved. The affection spread over lower extremities, then attacked face and neck, then chest and upper extremities. Death within forty-eight hours, apparently from involvement of muscles of respiration and deglutition.

[1] *Wiener Sitzungsberich.*, 1881.

W. P. Northrup (*Transac. Amer. Ped. Soc.*, i, 140, 1889): Girl, five days old, one of twins, weight seven pounds. Feet puffy, rectal temperature 96.5° F., and remained low. Examination two days later showed induration throughout lower and upper extremities, hips, shoulders, scalp, and face; most marked on thighs, arms, and cheeks, least so on abdomen; color brownish-yellow. Body stiff and very cold, as though frozen. Rectal temperature would not reach lowest figures of the thermometer, *i.e.*, 96° F. Died on ninth day of life. Autopsy revealed no edema; tissues cut hard; microscopic examination of skin showed nothing abnormal.

In the discussion of this case Huber said he had seen a fatal case in a child several months old. The symptoms were identical with those described by Northrup. Koplik said he had seen cases. Holt reported a doubtful case in a child thirteen days old, in which scattered sclerematous patches appeared over the shoulders, back, arms, neck and in the cheeks. The temperature was not subnormal. At the end of five months the patches had nearly disappeared. [Later, Holt ("Diseases of Infancy and Childhood," p. 117, 1897) says he has seen five cases.]

L. F. Barker (*Trans. Amer. Ped. Soc.*, v, 142, 1895): Boy, well developed at birth, taken with pneumonia when nearly nine weeks old. On the eighth day of this illness skin of buttocks was found to be hard. By the next day whole body was of woody hardness; skin could not be picked up and was cold; limbs rigid; power of swallowing lost. The scrotum was the only portion not affected. The child died on the succeeding day. Temperature during the attack of sclerema was not depressed, and on one occasion reached 102.5° F. Autopsy showed skin of marble whiteness without pitting on firmest pressure. It creaked when cut. Microscopic examination showed principally swelling and thickening of the fibrous bands of skin and subcutaneous tissue.

In the discussion of this paper Jacobi stated that he had seen a few cases.

J. L. Porteous (*New York Med. Jour.*, lvii, 442, 1893): Infant (sex not stated), developed the disease when two days old. When seen on the fourth day of life skin of legs, feet, arms, hands, back of shoulders and upper part of chest "had the feeling of india-rubber stretched over a frame." Color varied from deep purple to pink. Cry feeble, respiration seemed difficult; child stretched itself frequently "as if it felt stiff all over." Temperature 97° F. Constipation obstinate; punctures of skin let out only a little blood and yellowish fluid. On sixth day of life temperature fell to 87° F., and child died.

In addition to these cases there are two which have sometimes been considered instances of sclerema, but which cannot properly be placed in this category. They are as follows:

C. D. Smith (*New York Jour. of Med.*, xii, 190, 1854): Male child, presumably more than a year old; well when born. At age of six weeks developed swelling of the right hand, which progressively increased for six months, and then remained unaltered without extending. Child still living and in excellent health. Induration was hard as marble, with the local temperature lower and the color whiter, but sometimes purplish. It was painless and would pit on pressure.

C. C. McDowell (*Maryland Med. Jour.*, i, 203, 1877): Child three weeks of age had "the dermal lesion," involving the cutaneous surface largely (but a nearer description is not given). Subject to attacks of partial pulmonary collapse, and with these the dermal lesion was "always exacerbated." It recovered after four or five weeks.

We have still to refer to that curious condition, angioneurotic edema, as it was first called by Quincke. This affection, not particularly common at any period of life, is certainly uncommon during early childhood and especially during infancy. The following case seems properly to belong in this category:

CASE V. — Andre P., aged two and one-half months, of apparently healthy Italian parentage. The history could be obtained only with the greatest difficulty. It appeared that two other children were living and well. The patient apparently was well and properly developed when born, and remained in good condition until about one and one-half months old, when red blotches began to develop on different parts of the body. These would last only a few hours in any one spot and be followed by edema. The redness and edema shifted from spot to spot, lasting a few hours to several days altogether. The bowel movements had been loose and green for about a week before the child was seen by us.

The first examination, made June 18, 1896, showed the child to be much emaciated and decidedly anemic. The heart and lungs appeared to be normal. The right hand and forearm were edematous, pitting on pressure, and of normal color except for a glassy appearance. This condition was said to have been present for four days. The right leg and foot were swollen, and the mother stated that they had been more so, and that the genitals had been swollen also. The right side of the face was flushed and slightly harder than the left, but there was no distinct edema of the face, although it was stated that there had been some earlier that morning. The child's temperature was 100° F. The urine did not contain albumin. On June 19th, the left little finger was edematous and glassy in appearance. The redness of the face had disappeared. The right hand and leg were much swollen. The temperature was 99.2° F. On June 20th the edema of the left little finger and of the right hand and forearm had disappeared and that of the right leg was much better. There was a swelling over the right biceps, which had developed during the night. It was the size of a walnut, red, painful, and very hard. His temperature was 100.2° F. A second examination of the urine was negative. By June 22d all edema had disappeared except over the biceps, where it was somewhat more extensive and still slightly red. By June 25th this was less red, more glassy and very painful. The disturbance of the bowels had continued more or less from the first visit.

The child was lost sight of until July 17th. Then it was learned that the swelling on the upper arm had seemed obstinate in disappearing, and that the child had been taken to some hospital. There it was supposed that an abscess was present and an incision had been made, but as far as could be learned no pus was discharged. The child was still thin, but appeared well in other respects.

Angioneurotic edema is certainly closely allied to

urticaria, and, in fact, is probably identical with the so-called giant urticaria. It is certainly related to some of the manifestations of peliosis rheumatica and to Henoch's purpura. The following case, occurring in a child, illustrates a condition which might be described either as angioneurotic edema or as purpura urticans. The element pointing toward the former is the fact that the edematous part of the body was but little affected by the urticarial eruption.

CASE VI.—Barty C., five and one-half years old. On the evening of March 2, 1897, he developed a rash on the back and abdomen which strongly suggested measles, yet without the characteristic grouping, and with the presence of a few urticarial wheals. On March 3d the rash of the day before had become purpuric, and there was an additional development of a widespread erythema, with wheals. The face was very edematous, not flushed, and looked like typical nephritis. By March 4th the eruption was rapidly fading and the edema better, and by March 5th all symptoms had disappeared. Repeated examination of the urine had shown nothing abnormal.

The chief characteristic of angioneurotic edema is expressed by the definition "acute, local transitory edema." It is possible, however, as some cases have shown, for the edema to be more persistent in character. As a rule, the swelling appears suddenly upon some part of the surface, perhaps always the same in each attack, or varying in locality in different attacks, or leaving rapidly one part to develop suddenly in another. It lasts for hours or days. Gastro-intestinal disturbances not infrequently accompany the swelling. Heredity has a very decided influence in many cases. Exposure to cold is often an active exciting cause. The disease is probably a vasomotor neurosis, as Quincke maintained. It is associated in some way with forms of urticaria and of purpura, as the case just detailed exemplifies.

Angioneurotic edema developing early in life is rare, as we have said; yet it is noteworthy that one of the first reported cases (Dinkelacker) occurred in an infant. We have made some search, although not exhaustive, through medical literature for cases beginning during early life, but have found few. Very briefly abstracted they are as follows:

Dinkelacker (*Inaug. Dissertation*, Kiel, 1882): Boy of one year; had attacks of local edema from the age of three months. The father was also subject to the disease.

Falcone (*Gaz. degli Ospedali*, vii, 125, 1886): Boy of seven years; had well-marked attacks. His grandfather also had the disease.

Widowitz (*Jarhb. für Kinderheilk.*, xxv, 252, 1886; xxix, 388, 1889): Three cases. (1) Girl of seven years, in whom attacks of edema of nose, cheeks, and fingers had occurred since age of four years. (2) Boy of eight years, in whom attacks of edema of fingers and cheeks occurred from exposure to cold since age of six years. (3) Boy of six years, with swelling of face, and often of fingers, resulting from cold.

Johnston (*Amer. Jour. Obstet.*, April, 1885): Five-year-old girl; affected since three months old. Feet and hands grew red, swollen, and painful. Attacks brought on by exposure to cold.

Josephs (*Berlin. klin. Wochenschr.*, No. 4, 77, 1890): Five-year-old boy; affected since age of 2½ years. Swellings of unclothed parts when in cold wind. He had had an attack of hemoglobinuria. An eight-year-old cousin had similar swellings.

Loimann (*Wien. Med. Presse*, 753, 1888): Six-year-old boy; affected for three years. Attacked eyelids especially. Later, face and genitals,

Graham (*Ann. of Gynec. and Pediat.*, April, 1894): Child of seven years and nine months; affected since one year old. Frequent swelling of eyelids and face.

Mooney (*Detroit Med. Age*, xiv, 10, 1896): Girl of nine years. Backs of hands attacked.

Yarian (MEDICAL NEWS, August 29, 1896): Woman had had attacks from childhood. Edema, with vomiting, epigastric pain, and weak pulse. Mother had attacks from childhood. Maternal uncle affected. A girl cousin had attacks of edema. Boy cousin had the disease and died at age of seven. Maternal greatgrandfather and grandfather and some of the great uncles had periodic edema.

Gevaert (*Rev. Mens. des Malad. de l'Enfance*, xii, 369, 1894): Girl of three years; had transitory edematous tumor of left side of neck.

Osler (*Amer. Jour. Med. Sci.*, xcv, 362, 1888): Family history of five generations; twenty-two persons affected. Among them one man suffered from his youth; one girl of ten or twelve years was affected; one girl began to suffer when four or five years old; one girl had swollen legs ever since she was a small child.

Henoch (*Vorles. ü. Kinderkr.*, 8 Aufl., 612): Four cases reported, the first evidently belonging here; the others not so certain and not called angioneurotic. (1) Girl of four years; attacks of edema of feet, hands, and face, with malaise and vomiting. (2) Girl of four years; attack of edema of face and feet from exposure to cold. Pain in feet; anorexia and slight fever. (3) Boy of nine years; an attack of edema of face, scrotum, and prepuce. No cause found. (4) Child of four years; an attack of edema of face and thighs. No cause found.

Rotch (*Pediatrics*, 484, 1896): Two cases. (1) Boy of 2½ years. First attack at nineteen months. Eating of eggs would cause edema of eyes. (2) Boy of three years. Edema of hands. Attack ceased after circumcision of tight prepuce.

Masterman (*Brit. Med. Jour.*, i, 846, 1897): Boy of eight years. Severe edema of left leg and arm, and of eyelids, with purpura and pain, then of right arm with fresh purpura and severe pain. Later, an attack of dysentery.

There are, finally, the cases of edema occurring during infancy, which are of entirely doubtful origin and nature. We have already referred to the element of doubt attending many cases. Milroy[1] reports an interesting family history, in which, out of ninety-seven individuals in six generations, twenty-two had been affected. The edema involved one or both legs, and was permanent. It was congenital in origin except in one case, not beginning in this until the age of twelve years. These cases were believed by Osler to be allied to angioneurotic edema; but Mil-

[1] *Omaha Clinic*, v, 101, 1892.

roy believed them rather to be dependent on some congenital absence of valves in the veins. They certainly do not present the complex of symptoms of angioneurotic edema.

The following instance of edema is allied in some respects to those of Milroy; and, like them, its nature seems entirely obscure. We had the opportunity of seeing the patient through the kindness of Dr. Arthur Van Harlingen.

Benny S., four years old, seen January 27, 1897. The mother was healthy in appearance. There was nothing of note in the family history. Several other children were entirely well. The mother stated that the child was well when born, and remained so until he had measles at three months of age. The testicles and scrotum were said to have been very large at birth, but this enlargement disappeared later. At three months of age, or shortly afterward, swelling of the left leg and of the face began, and this has continued more or less ever since. At times the eyes have been so swollen that the child could hardly see. The swelling of the leg was constant, and, as it would appear, varied less than the swelling of the face. The operation of ritual circumcision had left edema of the remains of the prepuce. The child had always been normally bright. The mother stated that the urine had been examined repeatedly and nothing ever found wrong with it.

Examination showed a child well-developed bodily for his age, but rather pale. The intelligence seemed to be entirely normal. The head was slightly asymmetrical, one parieto-occipital region being slightly flatter than the other. The bridge of the nose was unusually broad and rather flat, this appearance being distinctly added to by a decided edema of the tissues about the bridge. The eyes had rather a peculiar, deep-set appearance, this being due possibly to the edema of this portion of the face. The left ankle and leg were swollen, giving the member a cylindric form. The edema would not pit on pressure, and was so firm that at first it seemed as though the tibia itself was greatly thickened, but further examination made it reasonably certain that the bone was of natural size. The child had coryza at the time of the examination and the voice was rather nasal. The examination of the urine a short time later was entirely negative in its results. Under treatment by pressure with medicated plasters the edema of the leg diminished considerably. The patient then disappeared from observation.

The peculiar persistence of the edema, and especially the localization to so great an extent in the left leg, made the case very obscure; and this obscurity was added to by the firmness of the swelling there. The expression of the face was decidedly suggestive in some respect of cretinism, yet there were no other symptoms which supported this diagnosis. We are entirely unable to account for the condition.

The following instance of edema of doubtful nature occurred in the Children's Hospital, Philadelphia, in the service of Dr. Alfred Stengel, where we repeatedly studied the case.

Harry B., twenty-three months old; admitted November 7, 1896. Family history negative. Previous personal history good. The present illness began five weeks before with fever, diarrhea, cough and cold extremities. On entrance to the hospital it was found that the child's liver was enlarged, and there was dropsy of the feet, eyelids, and abdominal cavity. The urine did not contain albumin. Examination on the following day showed the child to be evidently very ill, with cyanosis, great dyspnea, edema of the lower extremities, and to a less extent of the hands, and with physical signs of fluid in the abdominal and right pleural cavities. The heart-sounds were practically normal. There was no evidence of pulmonary consolidation. The blood examination gave 65 per cent. hemoglobin, and 3,500,000 red blood-cells to the cubic millimeter. The liver extended almost to the umbilicus. This was apparently due partly to displacement by the pleural effusion and partly to actual enlargement.

Under the administration of digitalis and purgatives the fluid disappeared from the abdominal cavity and the limbs, but that in the right pleural cavity continued to a considerable extent. On November 14th a second examination of the urine was made, with negative results. On November 24th the fluid was still present in the right pleural cavity but in less quantity. By November 30th it was decreasing here, but at about this date it was also found to be accumulating in the left pleural cavity. By December 11th fluid was still present on the left side, and to some extent on the right. The child's temperature up so this date had ranged from 99° to 100° F., but it now rose to 103° F., and varicella developed. This ran a moderately severe course, but disappeared without any sequelæ, the temperature now ranging about 99° F. By December 20th the child was improved very much in every respect, although fluid was still present in the left pleural cavity. By December 31st no fluid was to be discovered. He was discharged cured on January 4, 1897.

The origin of the edema in this case was at first entirely inexplicable. There existed no especial degree of malnutrition or anemia which could account for it, or any albuminuria or evidence of an inflammatory process anywhere. Later, when the fluid appeared in the left pleural cavity, it seemed possible that the child might be the subject of general tuberculosis, and that the behavior of the effusion indicated tuberculous pleurisy; but the subsequent course of the case renders even this improbable, and we are still in the dark regarding the nature of this case of anasarca.

No conclusions are necessary to close what has been said, further than to state that it has been our object merely to impress the importance of careful and more extended study of the forms of edema as

observed in children, and to illustrate those forms by the citation of cases which have recently occurred in our experience.

CLINICAL MEMORANDA.

A SUCCESSFUL OPERATION FOR INTESTINAL OBSTRUCTION IN AN INFANT SIXTY-FOUR HOURS OLD.[1]

BY EDMUND J. A. ROGERS, M.D.,
OF DENVER, COL.:
PROFESSOR OF SURGERY IN THE UNIVERSITY OF DENVER; SURGEON TO ST. LUKE'S AND ARAPAHOE COUNTY HOSPITALS.

FOR the details of the family history, and for the personal history of the patient during the sixty hours before entering the hospital, I am indebted to the physician in charge, Dr. MacArthur of Littleton, Col., to whose early diagnosis and close attention the successful issue of the case is in very great measure due.

The mother is twenty-four years of age. She was married in 1893 and has had three children. The first was born on July 4, 1894, and died three weeks later, presumably from septic absorption from a superficial abscess. The second was born in November, 1895, and lived only three days, dying with symptoms similar to those manifested in this case, a *post-mortem* examination proving the cause to be intestinal obstruction. From a description given by the father of the condition at the time of this operation, I infer that the obstruction was probably due to a constriction with a Meckel's diverticulum.

The third child, a male, whose case I am about to report, was born at 8 A.M. on Friday, May 21, 1897. At birth it seemed strong, healthy and well-developed. The parents were of course very anxious and apprehensive, and every symptom was closely watched. It was found that during Friday there was no passage from the bowels, although the parts seemed perfectly normal. At nine o'clock that evening, Dr. MacArthur irrigated the bowel with warm water and obtained about a dram of white mucus. Early on Saturday morning the irrigation was repeated, and the rectum examined by means of the little finger. At about 9 A.M. the administration of castor-oil in small doses was begun, and this was continued at intervals throughout the day until the evening, when a teaspoonful was given at one dose.

About two hours after its birth the child vomited a quantity of greenish water, but with this exception all through Friday and Saturday there was no vomiting. Its temperature remained about 99° F., in the rectum, and it appeared to be doing well in every way. Early Saturday evening, immediately after nursing, it vomited undigested milk. At about 9 P.M. a No. 8 soft rubber catheter was passed high up into the rectum and about two and one-half ounces of warm water and glycerin were injected. The catheter passed quite easily, and when the fluid returned hard white shreds of mucus were brought away, At midnight two ounces of olive oil were given in the same way. The child's abdomen was now a little distended but it nursed heartily, passed its urine, and did not vomit.

On Sunday, at 9 A.M., the high injections were again tried and two mucus shreds about three inches long came away. About 11 A.M. for the first time the child vomited a quantity of dark-brown fluid which had a slightly fecal odor. The vomiting was repeated at 3 P.M., when a large quantity was ejected, and again a smaller quantity at 8 P.M. During the afternoon the oil injections were repeated about every two hours. The friends think that gas may have been passed on Saturday. The injections on Sunday caused the child to strain with great violence.

About 8 P.M. on Sunday I found Dr. MacArthur waiting to consult me at my office. He was clear and emphatic in his conclusions that the case was one of absolute obstruction, and said that the parents realized the hopelessness of the condition and would consent to anything that promised a possibility of saving the child. He then started for Littleton, and returned before 11 P.M. to St. Luke's Hospital with the father and infant, having driven the eleven miles in an open carriage.

The operating-room at the hospital had been heated and the temperature was maintained at 90° F. The baby was then sleeping quietly. There was some distension, but no great amount of tympanites, the heart was beating 145 times to the minute and the symptoms seemed in no way urgent. Rectal injections, given in different ways, were tried, but with negative results, the water returning without stain. As there seemed to be no possibility of relief, and as delay would destroy the only chance of surgical interference proving successful, it was decided to operate immediately, and this was done between 12 and 1 A.M. on Monday, the child at that time being between sixty-four and sixty-five hours old.

In the operation I was assisted by Dr. MacArthur, while Dr. Elder, the anesthetizer of the hospital, administered the chloroform.

As no routine technic which would apply in the case of an adult could be followed in so young an infant, I was compelled to adopt such measures as seemed in my judgment best suited to the occasion. The abdomen was first carefully washed with soap and water, no stiff brush or hard rubbing being employed. The skin was then sponged off with one-to-sixty carbolic-acid solution, and the cord was trimmed down with scissors as closely as seemed safe and the surface of the stump carefully touched with a one-to-twenty solution of the same acid. These were the only disinfectants used in any way during the operation.

An incision was then made in the median line, carefully circling the umbilicus, and was extended as far as possible in both directions, the entire opening when completed being less than four inches in length. As soon as the peritoneum was penetrated, quite a large amount of fluid gushed out, showing that the cavity was fairly full. Several loops of gut immediately presented, which proved to be the upper small intestine. These were greatly distended, appearing to be more than one and one-half inches in diameter resembling adult intestines. They were immediately removed from the cavity and the small

[1] Read before the Colorado State Medical Society, June 16, 1897.

intestine followed down. The whole abdominal contents were very dark, the circulation seeming to be almost stagnant. The upper third of the small intestine was distended, and on following the gut downward it was found that it looped suddenly backward and all distension ceased, not in a marked line, as is usually the case in a distended intestine in the adult, but by gradual diminution. At about the middle the small intestine was closely bound to the posterior portion of the cavity by a transverse band. This band passed directly across the intestine, but was not adherent to it, although quite tightly drawn. I easily passed my fingers under it, when I found that I could flatten it out into a broad strip, the vessels and marked fibers contained in it running transversely across the bowel. In structure it appeared like the omental bands commonly seen leading into hernial sacs and to old adhesions. I quickly loosened it with my fingers, and, dividing it into two parts, tied it with catgut ligatures on each side and cut away the central portion. I did not stop to examine its attachments at each side, but they appeared to be deep. At this time I expected to have an opportunity to thoroughly dissect them out at a subsequent examination in the course of a few hours, but lessened the chance of being able to do so by losing no time in examining them then. Below this band the small intestine was contracted to about the size of a little finger and seemed to contain semisolid material. I removed all of the intestine from the cavity and found no obstruction below this. The attachment of the mesentery appeared quite normal. Even the cecum with the appendix attached came easily from the abdominal cavity. Considerable oozing took place from the engorged vessels and it was necessary to take up some blood with sponges moistened with hot salt solution. I did not flush or irrigate.

Without further delay the intestines were all returned, the abdomen stitched closely with silkworm-gut sutures, and a plain sterilized dressing applied. A gauze roller bandage was then put on with more than moderate tightness, so as to support the abdominal walls, and the child was wrapped in hot, dry blankets and artificial heat applied in many ways. He was under the influence of the anesthetic for thirty-five minutes.

Soon after stopping the chloroform, a very large amount of substance, which to all appearances and smell was ordinary myconium, such as would be passed by a normal child immediately after birth, was vomited. At 2 A.M. the child was removed to a room artificially heated to as high a degree as possible. Before the operation one-tenth of a grain of spartein was given hypodermically, and was repeated once during the anesthesia, and at this time one-sixteenth of a grain was given, also hypodermically, and this was repeated at intervals of about two hours. At 3 A.M. the child again vomited dark matter, and this occurred half-hourly until 7 A.M. At 4 A.M. urine was passed, and at 8 A.M. the first small bowel movement occurred, consisting of dark mucus-looking material. At 6 A.M. I began giving small frequently repeated quantities of hot water by the mouth, and at 10 A.M. injections of salt solution into the rectum. At 11 A.M. half a dram of malted milk by the mouth was first given, and occasionally repeated until the mother arrived. The vomiting ceased at 7 A.M. and was not repeated until 2.40 P.M. Artificial heat to the body and in the room was kept up, but the child's temperature in the rectum continued at about 103° F. and the heart-beat at about 160. In the evening, small bowel movements were frequent, having rapidly become pure myconium, and at about 9 P.M. a large quantity was passed at one time. From this time on the discharges were frequent and profuse, the child crying occasionally but resting a great part of the time, and generally doing well.

The hypodermic injections of spartein were reduced to one-twenty-fourth of a grain toward Monday evening and a few drops of aromatic spirits of ammonia were given internally at intervals. The malted-milk feeding was gradually increased in frequency and quantity, and the injections of salt solution used whenever it seemed necessary. On Monday afternoon it was discovered that the dressings were becoming thoroughly saturated, and on removing them at 1.30 P.M. clear blood was found oozing from the wound throughout its entire length. It was impracticable to directly check this, as it was so general, so a narrow strip of iodoform gauze was laid along the wound, the sterilized dressing applied outside of it, and the bandage more tightly applied. The dressings became stained again, but not in sufficient quantity to necessitate changing before the next day, when the oozing was too slight to demand special attention. From this time on the dressings were changed daily. The stitches and margins of skin became red and angry, but soon improved and repaired perfectly.

The child rested well at broken intervals, during Monday night, sleeping altogether about three hours, but when disturbed would cry with considerable vigor. On Tuesday a few drops of Scotch whisky were given with the malted milk, the temperature gradually becoming lower. The patient slept a great part of the time and the bowels acted frequently. On Tuesday evening, the mother having arrived, the child nursed with vigor and appeared to enjoy it. It was now attempted to stop the administration of spartein hypodermically, but after missing two doses it had to be renewed. On this day the black stools gradually gave way to normal, healthy movements, but these becoming greenish on Wednesday morning a dram of castor-oil was administered, and acted satisfactorily. The child now appeared almost normal and was treated as a normal child in every way, except that the mild stimulation and the heating of the room was continued. On Thursday morning its temperature fell to 98¼° F. and did not again rise. From this time on, improvement was constant, there being, however, a tendency to looseness of the bowels. The hypodermic injections were finally discontinued on Friday. Spartein was continued by the mouth during a few days longer. The stitches were all removed on Monday, the 31st, when the wound was perfectly healed and all redness and irritation had disappeared. On the fourteenth day the mother and child returned home. The latter has rapidly improved in every way, its weight increasing from six pounds on June 4th to nine and one-half pounds on June 16th.

This case has been one of great instruction and interest to me. It emphasizes markedly the fact that in an apparently hopeless case an operation which holds out any chance whatever should never be refused. It is never an easy or a pleasant duty to operate in the face of desperate odds, but it is a duty which should never be shirked. It tends also to show that perhaps young infants bear surgical operations much better than has been supposed. In this instance there seemed to be no shock, and no exhaustion followed. Indeed, when a week old the infant seemed to be in average health for a child of that age.

There is little to be said about the operation itself. As little as could be done, was done, and in as direct and simple a way as possible, the conservation of all energy and the avoidance of the danger of toxic absorption from the use of so-called antiseptics being especially aimed at. The great danger seemed to lie in the presence of the necrotic tissue at the cord attachment, but no infection occurred.

A matter of great difficulty, and in which there was very little to direct one's judgment, was the after-treatment. Especially, I had never before attempted to systematically stimulate an infant by hypodermic injections, but no unfavorable symptom or result followed.

A CASE OF TUBERCULOSIS INVOLVING THE HIP-JOINT, LUNGS, TESTICLES, INGUINAL GLANDS, AND ONE OR MORE OF THE VERTEBRÆ.[1]

By HERBERT MAXON KING, M.D.,
of Grand Rapids, Mich.;
Physician to Butterworth Hospital.

The patient presented himself at my office for examination, June 23, 1896. He was twenty-eight years of age, born in Sweden, had lived in this country ten years, was a furniture-carver by trade, was married, and the father of one healthy child. Both parents were living and in good health. During the summer of 1895 he suffered from what he thought was rheumatism, which in December of the same year caused such marked pain, referable to the left hip, that he entered the Chicago Swedish Home and Hospital. A diagnosis of hip-joint disease was made, and Dr. C. W. Johnson curetted the diseased bone and effected good drainage. Upon microscopic examination of the *débris* the disease was pronounced tuberculosis. While recovering from the operation "hemorrhage of the bowels" occurred, which complicated matters, and he was not discharged from the hospital until two months later.

The patient consulted me because of cough and expectoration, and pain in the left shoulder and in the lumbar region upon coughing. I found consolidation at the apex of the left lung. He expectorated about one ounce during twenty-four hours. The sputum was mucopurulent and contained bacilli tuberculosis. Urinalysis gave negative results. Maximum temperature in the afternoon from 100° F. to 101° F.; pulse from 100 to 120 per minute. The patient did well under treatment (yeast nucleinic acid, hypodermically, inhalations under pressure of medicated vapors, and the usual attention to nutrition), and I sent him into the country, August 4th, much improved, the temperature and pulse being much lowered and expectoration much less. He returned September 1st, feeling better than when he went away, but a few days afterward the pain in the lumbar region, which had never entirely ceased, became very severe, compelling him to remain most of the day in bed. Several urinalyses at this time failed to demonstrate the presence of any kidney lesion. On September 15th, the patient called my attention to a swelling of the right testicle, which was attended with much pain, especially upon standing or walking. He was then placed in a recumbent position and ice packs applied, with the effect of reducing the pain both in the testicles and the back, but the former remained very sensitive to pressure and the swelling did not diminish. At the same time the right inguinal glands become indurated and enlarged, one of them to the size of a pigeon's egg.

While suspecting the true nature of the orchitis, I was unable to verify the diagnosis until October 18th, when by delicate palpation a point of suppuration became evident. This was explored by means of a sterile needle and a drop of pus withdrawn, examination of which revealed the presence of bacilli tuberculosis. The diagnosis thus placed beyond doubt, removal of all of the involved tissues, as far as possible, was unquestionably indicated.

The patient was admitted to the surgical ward of Butterworth Hospital, and on October 20th Dr. Hugo Lupinski enucleated the right testicle (which was the size of a goose egg) and removed the involved superficial structures well into the healthy tissue. An effort was also made to enucleate the enlarged inguinal glands (which had now softened) without rupture, but, in handling, the sac of one was broken, and the pus escaped into the wound. The spermatic cord was tied off with silkworm gut as high up as possible, and in what appeared to be healthy tissue. The wound was not irrigated and the cavity made by the removal of the lymphatics was packed with gauze. The wound healed by first intention except where packed with gauze, and this soon filled with healthy granulations which closed the wound. Convalesence from the operation was uneventful. Upon cross section the testicle was found to be thickly studded with miliary tubercles, in many instances partially broken down and cheesy, there being two foci of suppuration, from one of which I had obtained the pus by which the diagnosis was verified.

Microtome section through the more solid portions of the gland, where the young miliary tubercles were so thickly studded, very prettily demonstrated the tuberculous process in its early stages (giant cells, etc.), and when treated for demonstration of the bacilli tuberculosis the latter also were found. After the patient was able to walk about he experienced a return of pain in the back, and this increasing, Dr. Lupinski discovered disease in the second and third lumbar vertebræ. Early in December the spine was fixed and supported in a cast, which gave marked relief. Pus finally found exit by two fistulæ on the left side, one in the inguinal line and

[1] Read before the Michigan State Medical Society, May 14, 1897.

the other about three inches below Poupart's ligament. When it became necessary to evacute the pus this was effected by aspiration, and an emulsion of iodoform injected afterward. One fistula has ceased to discharge and has closed; the other is practically dry.

Seeing this case as late in its history as I did, I can only theorize as to the location of the primary focus of infection; natural inference would, I think, place it in the apex of the left lung, from whence radiated the subsequent deposits. My purpose in reporting it is: (1) that of demonstrating to what degree it is possible for some patients to become, in a sense, immune to the seriously injurious effects of the infection of tuberculosis, especially when it is a simple and not a multiple infection, even though it be carried to the point of saturation, so to speak, and (2) that of making a plea for perseverance in treatment, *medical* as well as surgical, in all cases of tuberculosis, and not to relegate a patient to the list of incurables as soon as a diagnosis is made.

MEDICAL PROGRESS.

An Advocate of Blood-letting.—HOFF (*Jour. Amer. Med. Assn.*, August 28, 1897) reports twenty-six cases in which after other remedies proved unsuccessful, venesection restored the patients to life. The list includes puerperal fever, eclampsia, paralysis from congestion of the brain, brain fever, meningitis, and cerebrospinal meningitis, pneumonitis in its first stages, congestion of the lungs, liver, and abdominal viscera, peritonitis, croup, tonsillitis, hemorrhage of the lungs, and incipient phthisis. "Repeated bleedings," says the writer, "will do more to cure consumption in its early stages than any other single agent, especially when used in conjunction with an open-air life, and in a dry and medium high atmosphere." Hoff would have every medical student instructed in the art of venesection, so as to be ready to apply this much-neglected therapeutic measure in cases of acute congestion of the internal organs.

Mushroom Poisoning. — CAGLIERI (*Medical Record*, August 28, 1897) reports that a family of six persons partook sparingly of poisonous mushrooms supposed to be the *Agaricus muscaria*. Three children, all boys, aged five, eight, and ten years, respectively, ate one-sixth to one-half of a mushroom for supper. The following morning they appeared somewhat sluggish, vomited after the administration of castor-oil, and suffered from mild diarrhea with little or no pain. They died after periods of coma of varying length in 29, 40 and 80 hours after the ingestion of the mushroom. A little girl, aged four years, and her mother, each ate about one-sixth of a mushroom, and had no symptoms, except slight vomiting. The father, who ate nearly two mushrooms, presented gastro-intestinal symptoms in a marked degree, and was stupid for two days, with a moist skin, small, rapid and regular pulse, and quick, shallow breathing.

These patients, with the exception of the first boy, who died, and the little girl, were given one-fiftieth of a grain of sulphate of atropin every two hours. Strychnin was also administered. The pulse and respiration were improved by this treatment, but the coma was not changed. Caglieri explains the failure of the atropin to restore the patients, by the fact that it was administered thirty-six hours after the mushrooms were eaten. He regards it, nevertheless, as the best antidote for muscarin poisoning, but in another case he would give it in smaller doses, at shorter intervals.

The Yellow Fever Bacillus of Sanarelli and of Havelburg.—In the Public Health Reports, Washington, July 30, 1897, GEDDINGS calls attention to the fact that Sanarelli and Havelburg, working independently, and in places remote from each other, have each claimed to have discovered the specific microbe of yellow fever. Both agree that this is a bacillus, but the two germs described are in no wise similar. There is every reason to suspect that Havelburg has simply "rediscovered" the coli bacillus, a fate which many well-known investigators have met. The bacillus of Sanarelli was not found in one-half of the cases he examined, and although it killed guinea-pigs when injected in sufficient quantities, the organs of these animals did not present appearances at all similar to those of yellow fever; so that the evidence that the bacillus he describes is the real cause of this disease, is far from conclusive.

A New Splint for Nasal Fractures.—In the *Jour. Amer. Med. Assn.*, July 17, 1897, HAWES describes an appliance for the treatment of nasal fractures which is simple, easily made and applied, and which permits inspection of the nose without removal of the apparatus. It consists of a piece of No. 15 spring brass wire of suitable length, bent first into the form of a rectangular letter U, the arms of which are about an inch apart, and long enough to extend from the center of the upper lip to the crown of the head or beyond that point. Opposite the supraorbital ridge a sharp angle is formed, in order to permit the splint to enter the orbital cavity just beneath the orbital ridge. This angle is a means of fixation of the splint against the supra-orbital ridge, and is one of the most essential features of the appliance. The lower end of the splint; *i.e.*, the transverse portion, is carried forward, away from the lip, for a distance of half an inch.

Suitable compresses placed between the splint and the side of the nose will correct deviations. If necessary, a silk suture may be passed through the septum of the nose and tied to the transverse portion of the splint. No other appliance for drawing down and holding firmly the point of the nose or its alæ has ever been devised. In certain cases the inventor adds to the external splint an intranasal wire, which should be less stiff than that used externally, and covered with a soft rubber tubing. The splint is held in position by a strip of rubber adhesive plaster passing over the forehead and around the back of the head like a hat-band.

Plague Attacks Europeans.—It is reported that the plague is increasing in the Bombay presidency, and that several Europeans at Poonah have been attacked by the disease.

The Medical News.

A WEEKLY JOURNAL OF MEDICAL SCIENCE.

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Address the Editor: J. RIDDLE GOFFE, M.D.,
No. 111 Fifth Avenue (corner of 18th St.), New York.

Subscription Price, including postage in U. S. and Canada.

Per Annum in Advance	$4.00
Single Copies	.10
With The American Journal of the Medical Sciences, Per Annum	7.50

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LEA BROTHERS & CO.,
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SATURDAY, OCTOBER 2, 1897.

THE PRESENT-DAY METHOD OF TEACHING MEDICINE.

As the time is at hand when the medical college throws open its doors in cordial greeting to the incoming class, it may not be amiss to examine somewhat critically what is offered the ambitious student and sometime doctor, and perhaps to suggest certain lines along which the present system of medical instruction may be improved.

Argument is not necessary in order to enforce the statement that medical pedagogy lags far behind in the onward march of methods of instruction in general. The reason for this lack of progress is not difficult to find; it lies in the fact that medical teaching, in this country at least, has ever been a tail to the kite of practice. A community is indeed small that cannot furnish accommodations for the teacher's rostrum and student's bench, the faculty receiving no compensation except that accruing from the personal aggrandizement attaching to the title of "professor." To teach with all the nobleness the phrase implies lies far from the purpose and the comprehension of many who, perhaps unthinkingly, assume the obligation. This reprehensible condition of affairs will undoubtedly continue until, as our institutions become older, the great centers of learning, with salaried teachers who remain in touch with the profession only through the medium of the clinic, will exemplify in their work the higher and better methods.

It has been said that the science or art of medicine is a difficult one to teach, the truth of which statement one is unable to admit when it is remembered that to its study is attached a novelty almost continuous, and novelty always engenders interest, which, again, is the cornerstone of successful teaching. Correct pedagogic methods are everywhere centering about this word "interest," and it can but be acknowledged that he is the most successful teacher who best succeeds in exciting and sustaining it in the pupil. It is the failure of so many instructors to reach the required standard of excellence which is bringing the lecture method of instruction into disrepute, and it is into this method, also, that the personal equation enters so largely as to make it inapplicable as a universal teaching system.

In seeking something better a long step backward has been taken. The possession of a great mass of uncorrelated and unassimilated facts should not be a part of the armamentarium of the able physician, and yet it seems as though we are educating the student to do tricks and make set speeches during an examination, lengthening the college course a year or two in order that more speeches may be learned, only to be forgotten when they are no longer necessary for examination purposes. It would be absurd to think that such is the object of a longer course, but, nevertheless, it too often remains as a net result. Facts as facts have no place in education, but when they are properly correlated with others the opposite is true, and to be assimilated they must find a natural resting-place in the mind, in other words must fit into something which is already there. Possessing a keen and sustained interest and a goodly store of well-digested facts the next and final step, the deduction of principles, or formulation of correct action, becomes comparatively easy.

In what way may these great principles of teaching be put in practice? In the first place, interest may be sustained by making the entire medical course a perpetual clinic, for with an actual case as a text attention will never flag. About the positive

example may be grouped all the branches of medicine, from pathology to therapeutics. Facts should be taught, metaphorically speaking, by means of blocks, for one never grows so old that one does not best learn in this way. For example, the anatomy lecture-room is the dullest, most sleepy of places, while, on the other hand, that which it correlates, the dissecting-room, is always lively, always fascinating. Why? Because in the latter case, though the subject remains the same, the student is learning with blocks; he constructs the human body by taking it apart, and the lesson remains with him always, for although he may forget its terminology he never does its substance. The old scheme of preceptorship owed much that was good in it to such a system.

The clinic should always be a recitation-room, for it is here that the student should deduce those principles and confirm those facts which, later, are to be the mainspring of correct action. With the popularizing of the newer, but really older, system we may sometime realize the final examination which instead of being a mere test of memory will be a test of qualitative thinking, thus determining the quality of the man who, after all, must earn his living as a practitioner of medicine, surgery, and midwifery.

THE MOSQUITO AS AN ETIOLOGIST.

ALL joking aside, the question whether a mosquito can carry contagion, is an important one; grave enough to have attracted the attention of serious investigation. The latest testimony along this line seems to be against the insect. It is given by Ross in the *Indian Medical Record*, May 1 and 15, 1897. A mosquito bite, like any other wound, may be the starting-point of infection; and the object of Ross' investigation was not to establish this fact, but to learn by experiment whether or not malaria may be transmitted by means of mosquitoes.

It is conceivable that this transmission might be brought about in a variety of ways: by the ingestion of water in which they have laid their eggs, or which contain their *débris*; or by the inhalation of dust from the dried pools in which they have lived, or by their bite, or by the feces, which the insect leaves upon the skin, getting into the mouth from fingers which have scratched the irritated surfaces.

In the series of experiments conducted by Ross, no results followed the bites of insects previously fed upon malarial subjects, although in one instance no less than thirty-six insects were turned loose upon one man whose history showed him to be likely to contract malaria on slight exposure. The mosquitoes were kept for various lengths of time before they were used, in order to give the malarial parasites time to reach the proper stage of development. It is possible that the species of mosquitoes employed were not the varieties which are capable of carrying malaria, as the species of this insect are many, and it is at least supposable that only one of them, or a limited number of them afford suitable conditions for the growth of the parasite.

The experiments with water in which mosquitoes had lived, and which contained their *débris*, including the spores of the gregarian (pseudonavicellæ or psorosperms), were more successful. In three out of twenty-two experiments, the ingestion of such water was followed by a distinct though slight attack of malarial fever; while in two other instances, there was a slight reaction which may or may not have been malarial in its nature. Leaving these indefinite cases out of consideration altogether, there still remain three positive results in twenty-two cases, and Ross estimates that although the natives in his district are subject to frequently recurring attacks of malarial fever, a liberal average would allow every native one attack each year, and that gives one case in every seventeen subjects in a period of three-weeks' duration. It may be urged that these cases are so few that they may still have been a coincidence; but this is an interesting line of experimentation, and the result is sufficiently striking to warrant further investigation.

HOW EVERY TOWN MAY POSSESS A GENERAL MEDICAL LIBRARY.

A SUGGESTION under this title is made by one of our correspondents which is worthy the careful consideration of every member of the profession residing in a town not yet possessing a public medical library. There are certain standard works which every practising physician must feel are indispensable to his daily work, and which he must have at hand for constant consultation. At the same time the fact must be recognized that few physicians are able to own all the books which at times they feel the necessity of consulting. To provide for such

contingencies, the suggestion of our correspondent seems practicable and worthy of prompt and general adoption.

In connection with the subject of books, we are apt to recall the familiar statement of Emerson: "I visit occasionally the Cambridge library, and I can seldom go there without renewing the conviction that the best of it all is already within the four walls of my study at home. The crowds and centuries of books are only commentary and elucidation, echoes and weakeners of these few great voices of Time." This is true in the realm of letters, but does not suffice in the department of medicine. Medical science is advancing so rapidly at the present time that the latest and best book of the highest authority becomes antiquated in many of its details and demands a revised edition almost before the first has been exhausted. Moreover, no single authority is able to present all of the facts and experiences of the different observers from which his conclusions are drawn. Every practitioner who is at the same time a student in his special work desires very often to go behind the conclusions even of the best authority and investigate the facts upon which his deductions are based. The doctor, therefore, is called upon to buy many books, and his desires in this direction frequently outrun his ability to satisfy them. By adopting the suggestion of our correspondent, especially when consultation is held as to how the investment in books from year to year shall be made, all of the latest and best authorities may be brought within the reach of the humblest practitioner.

ECHOES AND NEWS.

Dr. Nammack Appointed Visiting Physician to Bellevue Hospital.—Dr. Charles E. Nammack has been appointed visiting physician to the Non-collegiate Division of Bellevue Hospital, New York.

Dr. Joseph Collins Receives a Prize.—The Alvarenga Prize of the College of Physicians of Philadelphia, for 1897, has been awarded to Dr. Joseph Collins of New York, for an essay on Aphasia.

Alumni Association of St. Mark's Hospital.—The graduates of St. Mark's Hospital, New York, have formed an Alumni Association. Meetings will be held monthly at the hospital. President, Leon F. Garrigues, M.D.; secretary, Martin J. Schur, M.D.; treasurer, Casper Stock, M.D.

The University of California Rejects the Petition of the Hahnemann Hospital College.—At the last meeting of the Regents of the University of California, the petition of the Hahnemann Hospital College requesting admission to the University was rejected. Fourteen members voted against and four in favor of such affiliation.

Indian Plague in Caucasia.—A despatch to the *Daily News* (London) from Odessa says it is reported that there has been an outbreak of the Indian plague in the northern Caucasus. The officials refuse to give any information concerning the invasion, but it is known that a sanitary commission has left Tiflis to investigate.

Deadly Well Water.—Water from an abandoned well has given rise to several cases of typhoid fever near Rye Beach, N. Y. A party consisting of half a dozen persons went into camp near that place and drank water from an old abandoned well. The whole party immediately became ill, and two of the members have since died.

Diphtheria in Woonsocket, R. I.—Five deaths from diphtheria have occurred lately in Woonsocket, R. I. Since July 1st, there have been fourteen deaths from the disease, and it is estimated that over a hundred cases have existed in the city. The health officers and the board of city physicians are doing all in their power toward stamping out the epidemic.

Strange Equine Malady in Maryland.—Dr. A. W. Clements, State Veterinarian, reports the existence of an alarming epidemic among horses on the Eastern Shore of Maryland. More than one thousand have died of the disease, which is supposed to be caused by eating some poisonous vegetable matter. It is feared that the epidemic will become general throughout the State.

Prize Awarded to Dunant.—Moscow, in honor of the Medical Congress just held here, gave $1000 for a prize to be awarded to some person who has done eminent service to medical science during this generation. On Professor Virchow's motion, the prize was given by the Congress to Henri Dunant, founder of the Red Cross Society who is living in great poverty in Switzerland.

Occupation of Cats as Mice-Catchers Gone.—Cats are to be dropped from the German military establishment; they have now an allowance of $4.50 a year each for training, medical care, food, and badges. They are employed to protect the depots of military stores from mice. Professor Löffler, however, having discovered a typhus bacillus fatal to mice, this will be substituted for the cats.

Paris Hospitals.—It is said that several of the Paris hospitals which are built of wood and in a wretched condition are to be demolished and structures of stone and brick erected in their stead. Among these are the Pitié Hospital, built during the reign of Louis XIII., the Broussais Hospital, built in the course of six weeks in 1883, and the Aubervilliers Hospital, which is reserved for contagious diseases.

Success of the Recreation-Piers.—At a recent meeting of the New York Dock Board, a report was read stating that during the eighty-two days in which the recreation-pier at the foot of East Third street has been in use over 325,000

persons have availed themselves of it. The new pier at the foot of East Twenty-fourth street, which cost $150,000, and was dedicated September 25th, will be enclosed in glass during the winter, and arrangements have been made to give concerts and popular lectures there.

Health Board War Ended.—In a decision handed down by Justice Barnard of the Supreme Court of New York, it is declared that the Board of Health of Northfield, Staten Island, was illegally constituted, and that the removal of Health-Officer Woods was illegal. Last spring the village trustees found fault with the Health Board, which consisted of five members, and increased the number to seven. As no provision was made in the charter for such an increase, Justice Barnard decided that the trustees had no power to make it.

Insurance Against Twins and Triplets.—*Apropos* of a new form of insurance referred to in the last issue of THE MEDICAL NEWS providing against the accident of twins or triplets, the so-called enterprising insurance man would doubtless be enabled to follow his calling in England, as a correspondent writes that he is cognizant of the existence of such a society in London. A lady of prominence in London social life took out a policy for £500 last year, which was paid without question by the company nine months later when she was delivered of twins.

Value of Pure Milk.—The great value of Pasteurized milk in reducing the number of deaths among infants from diarrheal diseases, is shown in a letter sent recently by the Brooklyn Board of Health to Nathan Straus, who supplies it to the poor at a nominal price. The death-rate of children under two years of age decreased from 137 in 1895, when the milk was not used, to 119 in 1896, when Mr. Straus introduced it, and 101 this year. These figures, based on an estimated population of 100,000, cover thirty-eight corresponding weeks in each year at a time when the disease is most prevalent.

A Case of Prolonged Unconsciousness.—Much attention has been given in England to a peculiar case, known as the "Dover Cliff Mystery." On August 5th, a young girl, aged seventeen, was found unconscious and bruised on the beach near St. Margaret's at the foot of a cliff 200 feet high, and was removed to the Dover Hospital. The character of her injuries (a severe bruise on the right side of the forehead and slighter contusions on the occiput and left ankle) makes it seem most improbable that she had fallen over the cliff, as was at first supposed, and it has been suggested that she was sunstruck while walking on the beach and received the bruises in falling to the ground. The possibility of the case being one of typhoid fever arises when it is remembered that long periods of unconsciousness, lasting more than four weeks, have been known to occur in this disease. The temperature curve, also, is not unlike that of typhoid. The principal treatment has been the use of the cold pack whenever the temperature rose above 102° F. Bromid of ammonium and iodid of potassium were given internally, with a diet consisting of milk and beef-tea. The systematic use of the ice-pack and indefatigable attention to nutrition have thus far preserved the girl's life, but she still lies unconscious.

Health Reports.—The following statistics concerning cholera and yellow fever have been received in the office of the United States Marine Hospital Service during the week ending September 25, 1897:

YELLOW FEVER—UNITED STATES.

		Cases.	Deaths.
Mobile, Ala.	September 18.	11	..
" "	September 19.	2	..
" "	September 20.	1	..
" "	September 21.	2	..
" "	September 22.	4	..
" "	September 23.	2	..
" "	September 24.	3	3
Atlanta, Ga.	September 23.	1	.
Cairo, Ill.	September 19.	2	..
"	September 20.	2	..
Louisville, Ky.	September 23.	1	1
New Orleans, La.	September 18.	5	1
" "	September 19.	6	2
" "	September 20.	18	..
" "	September 21.	9	..
" "	September 22.	12	2
" "	September 23.	9	3
" "	September 24.	10	4
Barkley, Miss.	September 18.	1	..
Biloxi, "	September 19.		1
" "	September 20.	1	1
" "	September 21.		1
" "	September 22.	5	1
" "	September 23.	..	..
" "	September 23.	..	..
Edwards, "	September 19.	4	..
" "	September 20.	2	..
" "	September 21.	12	..
" "	September 22.	13	2
" "	September 23.	23	..
" "	September 24.	29	..
Ocean Springs, "	September 18.	2	3
" "	September 22.	4	..
" "	September 23.	6	..
" "	September 24.	1	..
Scranton, "	September 19.	1	..
" "	September 20.	15	..
" "	September 22.	4	..
" "	September 23.	6	..
Beaumont, Texas.	September 22.	1	..

Notes on the Yellow-Fever Epidemic in the South.—Two patients with yellow fever reached New York quarantine on September 22d on the steamer "Finance" from Colon. They were immediately transferred to Swinburne Island, and the other passengers and the crew of the steamer were sent to Hoffman Island, where they will be kept under observation.

The city council of New Orleans, at a special meeting held recently, placed $25,000 at the disposal of the Board of Health with which to fight yellow fever. An additional $25,000 is held in reserve to be used if the situation becomes serious enough to make this necessary. The members of the board, however, think there is no danger of the epidemic spreading.

The city authorities of Atlanta, Ga., have threatened with severe punishment anybody who spreads an inaccurate report that there is yellow fever in that city.

A death from yellow fever is reported in Beaumont,

Texas. A rigid quarantine has been established in the hope of checking the progress of the disease.

The Queen Regent has ordered that special surveillance be exercised at Spanish ports on all arrivals from the United States ports, in consequence of the outbreak of yellow fever in some of the Southern States.

At the request of the Pennsylvania Railroad, Health Inspector Benjamin of Jersey City furnishes health certificates to conductors of trains which are to pass through Alabama, as the laws of that State require that all conductors be examined and certified to before they leave the North.

Because the Board of Health of New Orleans made arrangements to use a school-house for a temporary fever hospital, a mob of excited individuals living in the neighborhood ordered the doctor and Sisters of Charity to leave the building and proceeded to set fire to it. Part of the building only was destroyed. As it stands in a park by itself, away from other buildings, it would seem that those living near were unnecessarily alarmed.

Dr. Lovell, son of Colonel Starr Lovell of Mississippi, died at New Orleans on September 22d from yellow fever. He contracted the disease while attending fever patients.

CORRESPONDENCE.

HOW EVERY TOWN MAY SECURE A MEDICAL LIBRARY.

To the Editor of THE MEDICAL NEWS.

DEAR SIR: That a large, well-selected public medical library is an absolute necessity for any one who wishes to write upon or thoroughly study any subject connected with the art and science of medicine, no one will dispute. The experiences of ages and the results of innumerable investigations are crystallized in books. Every book is a great institution by itself. On this shelf is my physiological laboratory, on the other my biological institute; here my anatomical theater, there my lying-in-hospital. Whenever I wish, I can converse with Virchow, Da Costa, and Keen. I can at will make all the dead, from Galen to Charcot, arise and give me in turn some of their wisdom.

I do not presume I have said anything new, for every one of us is somewhat of a book-worm, yet the number of cities that possess a public medical library may be counted upon the fingers. True, some of our fortunate brethern-in-Esculapius can buy all the books they wish to read, but no individual can afford to get together all the books that he *might* at some time wish to consult. It is obvious, that the most practical and most economic way for each community is to own a public medical library, where the best works may be gathered together, and where one book supplies the wants of many, at a small cost to all concerned.

When I came to Denver, after having fattened upon the luxuries of the library of the College of Physicians of Philadelphia, I though that in the wild and woolly West I should miss entirely this pleasure. I was, however, pleasantly disappointed in finding a wisely selected, thoroughly indexed and well-kept medical library.

Having had an occasion to make some extensive research, I found, to my regret, that the library was not sufficient for my purpose. It was natural that I should turn to my friends and acquaintances for assistance. I went from one physician to the other and inquired for the volumes I wished to consult. And, lo and behold, to my great joy I had to cry *eureka* a good many times a day; in fact, I found upon the shelves of the private libraries of my friends here and there a book which would make the mouth of the Surgeon-General water. Furthermore, I have convinced myself that the physicians themselves on account of lack of proper arrangement and the absence of an index or catalogue did not know what valuable books they owned. The larger the collection of books, the more difficult it was to ascertain what it contained, and the less available it was for reference.

I then conceived the idea of a Union Catalogue of Medical Books and Journals and on December 9, 1896, I read a paper before the Denver and Arapahoe Medical Society, entitled: "How the Library of the Colorado Medical Association Can Double the Number of its Volumes without Making Any New Purchase—A Suggestion." The title of the paper, which seemed to many to be of the "catchy" sort, brought to the meeting all the officers of the library, and also the accomplished librarian Mr. J. C. Dana, all of whom were eager to find out how to make something out of nothing.

My suggestion was a very simple one. A catalogue of the public medical library should be sent out to every physician residing in Denver with a circular letter requesting that he should at his leisure prepare a list of such of his books and journals as are not found in the public library; such list to be returned to the librarian. The librarian should prepare a card catalogue of such books and periodicals as the lists should furnish; such catalogue to be kept for reference. Each card should indicate in whose office each book may be found, and at what hours it would be accessible to readers. By adopting this plan I was sure that a thousand volumes of medical works which are not to be found in the public library could at once become available for use, and this, without expense or inconvenience to any one.

The writer of these lines had the satisfaction of hearing the consensus of opinion that the plan was both useful and feasible.

The work has been accomplished. The librarian has prepared a carefully indexed card catalogue by author, title, and subject of all the books and journals from the lists which I have furnished. The result has exceeded the most sanguine expectations. We have added to our library about two thousand titles, and more than six thousand volumes. The physicians without exception have heartily co-operated in the work, and cheerfully offered their books upon the altar of mutual helpfulness.

Of course, this plan may be carried out more efficiently in any city where there is a medical library. But in cities where there is no library by adopting this plan the foundation of such can be laid, provided the physicians will show a spirit of fraternity and co-operation. Even in small cities there are enough books scattered among

the practitioners to constitute a good reference library, if they were only supplemented with a good index. Experience has taught us that we cannot leave the work of making out the lists to the physicians themselves. The work must be accomplished by one or two individuals. He who has just graduated, or who has a superabundance of time on his hands should undertake this work of love. He will soon find that the work besides being profitable to the whole profession, which will be gratefully acknowledged, will at the same time be of great help to him in the future. He will acquire an acquaintance with the medical literature which he could not otherwise obtain. He will see all the prominent physicians at their best, for no matter how uncommunicable a man may be by nature you will find him talkative and genial when the subject concerns his favorite books.

I hope that this plan will be adopted wherever the profession is fairly organized and living together amicably. This practical and inexpensive plan will not only foster learning and facilitate research, but it will strengthen the moral ties which bind the members of the profession one to the other, and, eventually will serve as a nucleus of a future library.

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TWELFTH INTERNATIONAL MEDICAL CONGRESS.

[From our Special Correspondents.]

MOSCOW, August 23, 1897.

THE Section of Bacteriology and Hygiene met August 20, 1897, in the Historical Museum, the President, Dr. M. S. Boubuoff of Moscow, occupying the Chair. The first day was devoted to reports and communications in regard to water supply.

Professor T. Hueppe of Prague in the discussion of this subject said that in the examination of water it is always necessary to consider the geologic conditions surrounding the source. He emphasized the point that the bacteriologic examination may be negative and yet the water be unfit for use, in consequence of which such an examination is not alone sufficient, but must be supplemented by careful chemic and geologic analysis as well. Hueppe approved in general of the filtration of water to be used for drinking purposes, and of the method of sand-filtration in particular, but stated that such systems should be constantly under the supervision of a competent bacteriologist who should make daily examinations in order that the filter may be cleansed at the proper time. He did not think that a bacteriologic test would always indicate whether or not the water is infected—a point which was disputed by some of the members present.

Professor Victor C. Vaughan of the University of Michigan, U. S. A., read an able paper, entitled the "Bacteriologic Examination of Drinking-Water." Professor Vaughan has been engaged in such examinations for the past nine years, particularly specimens of water supposed to have caused typhoid fever. During the past four years he has examined 359 samples, 83 of which were suspected of having caused typhoid; 157 specimens were regarded with suspicion, and 119 had been examined in view of selection of a proper water supply. The examinations had consisted of the ordinary plate-tests, counting of germs per cubic centimeter, isolation of the different micro-organisms, and the inoculation of animals with mixed and pure cultures of the germs found in each of the specimens examined. Of the 359 samples, eighty contained germs which proved to be pathogenic for different animals, and fifty-six of these were specimens of water from the class supposed to have caused typhoid fever. He divided the pathogenic germs into two classes, *viz.*: (1) those of the colon group, and (2) those resembling the typhoid bacillus. Vaughan did not find either the typical germ of typhoid, nor did he succeed in isolating a pathogenic spirillum. Waters containing germs belonging to the colon group he did not condemn, but those containing germs resembling the typhoid bacillus were all condemned; and the fact that every epidemic of typhoid fever ceased as soon as the use of such water was discontinued proved that such examinations are of great value.

In the discussion which followed Professor Dense of Hamburg pointed out the important results which had accrued to the city of Hamburg from the use of filtered water, and further, that cholera and typhoid fever ceased upon the introduction of sand-filtration.

The next day, August 21, 1897, an interesting paper was read by Professor Victor C. Vaughan, entitled "The Prevention of Tuberculosis." The following is a summary of the author's conclusions: (1) All milkmen should be provided with a license from the municipality; such a license not being granted until the cattle have been inspected by a competent veterinarian who should apply the tuberculin test in every instance, and any animal found suffering from tuberculosis should be immediately destroyed. (2) Cattle killed for food should also be subject to skilled inspection. (3) The disinfection of sputum from consumptive individuals is absolutely necessary, and such persons should not be allowed to expectorate in the streets or public vehicles. (4) Houses and rooms which have been inhabited by consumptives should be disinfected. (5) The government should construct, equip, and maintain, hospitals for paupers suffering from tuberculosis; such hospitals should be divided into two classes —one for incurables and the other for those who may recover. (6) Tuberculosis in its early stage is a comparatively curable disease, therefore, persons yet in this stage should be examined once or twice a year by a physician, and the government should furnish physicians to make such examinations for the poor.

Dr. Stchepotier of Constantinople discoursed upon the subject of "Sanatoria for Consumptive Poor for the Protection of Public Health." His conclusions were: (1) The true treatment of tuberculosis, hygienic and dietetic, cannot be applied except in a special hospital situated at a sufficient distance from any urban district. (2) Pure air and sunlight are the most potent enemies of this disease, therefore, such sanatoria should be located where the patients may spend the greatest length of time in the open air. (3) Consumption being principally a disease of the poor, it is desirable that governments, municipalities,

philantrophic associations, medical and public-health societies, should assist in the foundation of institutions for the care of consumptives of the poorer classes. (4) Every large urban population should provide such an institution located outside the city where conditions are as favorable as possible for the cure of tuberculosis.

"The Periodicity of the Occurrence of Epidemics of Diphtheria in the Rural Portions of Russia" was the title of a paper by Dr. A. K. Tschepourhovsky of Moscow. He stated that such epidemics occur about every ten years with a certain amount of regularity, the interval between epidemics depending upon various factors, among which the following are the most important: Age, individual susceptibility, rapidity of the spread of the disease, efficiency of the measures taken to arrest the epidemic or the absence of such measures. The fact that it is possible to know in advance the time when an epidemic will appear allows precautionary measures to be taken. The study of these epidemics, their periodicity and origin, is a subject worthy the attention of the health-officer and epidemiologist.

Professor Edward Nocard of Paris spoke upon "Serum Therapeutics in Tetanus." He considered the tetanus antitoxic serum both as a prophylactic and curative agent. His conclusions were as follows: (1) When tetanus has once declared itself, the antitoxic serum has no action; it is powerless to arrest the fatal termination of the disease, and this without reference to dosage or strength of serum; those alone are cured who would have recovered in any case. (2) The serum-treatment is, however, useful even in actual tetanus, for although the number of cures is not increased, yet those who do recover do so more quickly. (3) The antitoxic serum, even in weak dosage, if employed at the moment of the reception of the suspicious injury, or even some time afterward, will prevent the onset of the disease. (4) The dose must be both larger and stronger according to the length of time intervening between the reception of the wound and the employment of the serum; intravenous injections are more potent than hypodermic; the attack of tetanus is not always warded off, but, as a rule, if the disease occurs it is of a mild type, and the animal recovers, even though injected with a dose of toxin invariably fatal to a control animal.

Dr. A. Mennella of Rome read a paper upon "Cycling," in which he endeavored to prove that cycling had lost its true aim, and that the exaggerated manner in which it is now employed has changed the advantages which it possesses into real and sometimes dangerous disadvantages. A medical man should not consent to wheeling as an exercise for anyone of whose health he is not sure, as it is dangerous for persons predisposed to pulmonary, heart, or genito-urinary disease. Cycling is injurious to health from three causes—the contraction of the muscular system, chills following perspiration, and the stooping posture, which renders respiratory movements defective.

The labors of the Section were terminated by a visit to the Institute of Hygiene of Moscow and the city abattoirs, which latter are situated far enough from the city to obviate any sanitary nuisance.

MOSCOW, August 28, 1897.

SIR WM. MACCORMAC, who presided at the last general session of the Congress by invitation of the President, Professor Skliffosovsky, closed the session and at the same time the Congress, not with "*adieu*" but "*au revoir*," at Paris in 1900. Just before the end of the meeting there was a very touching scene. Professor Virchow, as the representative of the medical men assembled from all over the world, thanked the Committee of Arrangements, and especially Professor Skliffosovsky, for the perfection of entertainment the members had enjoyed, for the cordiality of their reception, and for the hospitality they had found everywhere in Russia, and especially here in Moscow. The words of grateful appreciation were evidently heartfelt, and above all they echoed the sentiments of the members of the Congress. Virchow's address was followed by prolonged and enthusiastic applause. Feeling that too many of the thanks were coming to him, Professor Skliffosovsky turned to the audience to explain that the greater part of whatever success the Congress had met with was due to his colaborers on the committee, but words failed him for the expression of his feelings in a foreign tongue, and with tears in his eyes and broken voice he proceeded for a few sentences in Russian, of which the untutored stranger's ear could catch only the word "bratj," "brothers," and then broke down completely. It was because Russians have worked together shoulder to shoulder as brothers that the successful result has been attained. A wave of sympathetic emotion which could be felt passed over the audience and for a moment the east and west of Europe were united in more cordial feelings of brotherhood than ever before.

The last general assembly was at least as interesting as had been the preceding ones. The paper of Professor Loukianow of St. Petersburg on "The Inanition of the Cellular Nucleus," was the simple relation of a bit of ground-breaking work which may have far-reaching results. The morphology of the cell is much better known than its biology; in fact almost nothing is known of life processes within the cell except in so far as they affect its form. As to the nucleus, the obscurity is still deeper and practically nothing has been known regarding it up to this time. About a year ago the results of some work was published from Loukianow's own laboratory in the Institute of Experimental Medicine, in which some facts as to the effects of inanition on the cell-nucleus were deduced from its analogy with bacteria. It was found that bacteria lose during the first four to six days of inanition fifty-one per cent. of their substance, and then remain in a state of comparative equilibrium as regards weight for forty to eighty days. During this time cultures may be made, showing that life is still present. Nuclei have a good many analogies with bacteria in their life history, and so it was argued that nuclei, too, might lose one-half their substance and yet not undergo degeneration.

Some direct experiments to demonstrate this were undertaken and the results of these observations formed the basis of Loukianow's paper. In animals which had lost thirty-five per cent. of body weight from inanition, care-

ful micrometric measurements of the cells of the pancreas showed that while the cell itself had lost thirteen per cent. of its volume the nuclei had lost but three per cent. This seemed to demonstrate that the nucleus was independent biologically of the cell body. This autonomy of the nucleus would demand a composite structure, but beyond the varied granular appearance which different stains brings out, no structural arrangement was discoverable.

Further experimentation, however, brought out another fact in the biology of the nucleus. White mice were fed on a series of exclusive diets, some on lard alone, others on sugar, some on peptone, white of egg, and hay. When the animals of each series had lost about thirty per cent. of their body-weight, which required very different lengths of time for the various dietaries, the nuclei of their liver and pancreas-cells were examined. They were found to have reacted very differently according to the kind of food which had been given. In one series they had lost forty-four per cent. of their volume, or more than the bodies of the animals, and in another only twelve per cent. The nuclei would seem, then, to have a selective action in their nutrition. In these observations, however, as in the others, no differences of structure and no noteworthy modifications of the general appearance could be discovered.

Professor Leyden spoke of "The Therapy of Tuberculosis." Notwithstanding all that has been done and claimed for various special therapeutic measures in the treatment of tuberculosis, the conclusions, as expressed at the last International Congress of the Nineteenth Century, are that no specific treatment is known, and that only careful constitutional treatment under favorable climatic and hygienic conditions avail to arrest the progress of the disease. For Professor Leyden, sanatoria for tuberculous patients constitute the best means we have to increase the resistive vitality of the organism, to prevent the further progress of the disease, and eventually in many cases to lead to a cure of the condition if it has been taken in time.

The discussion of the subject at the sessions of the Medical Section of the Congress during the week had already showed that this is the impression generally prevalent in Europe as to the therapy of tuberculosis. Tuberculin, even in its latest form, has given no results that can be considered even encouraging, and not much hope seemed to be expressed in the ultimate successful serumtherapy of the disease. It is to be noted, however, that this is the opinion of practical therapeutists, not of bacteriologists, who in their section were of another mind..

Professor Lombroso of Turin, was welcomed with prolonged applause which showed how popular are the man and some of the ideas in psychopathology which he represents. His discourse was rather a popular exposition of the present position of what may be called "physiologic psychology" rather than a scientific exposition of its principles. He considers that the best guarantee we have at present that the new science is really and essentially a science is the opposition its development has awakened, for every new science has met with just this opposition at its inception. The idea of criminal anthropology, however, is not to take the criminal out of the hands of the law, but to protect the irresponsible and even the seeming criminal in as far as he is irresponsible from the rigors of a code founded to too great an extent on the absolute accountability of all men for their acts and without sufficient consideration for, and appreciation of, the physical elements which modify that accountability. The science acquires additional interest from the fact that its investigations are leading us to a closer knowledge of the relations between genius and insanity and the far-reaching influence of heredity in mental conditions.

One of the great drawbacks to the development of the science of psychopathology has been the inability to find definite anatomic lesions as the basis of its symptomatic affections. The objection, however, holds for most of the nerve-affections and it is only the further progress of minute cerebral anatomy in which so much has been accomplished during the last few years that can give us the keys to the mystery of disturbed as well as normal brain functions. Lombroso thinks, however, that the adoption of precocious explanatory hypotheses will delay rather than further the progress of the science. The explanation of certain of the phenomena of memory, of sleep, of double consciousness, of hysteria, and of hypnotism on the theory of the contractility of the neurons, with making and breaking of nerve-circuits, he considers supported by too few observations to be tenable. It is an alluring bit of theory but nothing more, in the present state of our knowledge. Lombroso, seems, however, to admit more easily, a good many of the disputed observations with regard to hypnotic states and double consciousness which have of late years done so much to bring certain phases of the new physiologico-psychology into prominence. There was even a suggested explanation for certain telepathic influences—*actio mentalis in distans*—which smacked of mere wordiness, *vox et præteria nihil*, "for the polarization of certain cerebral molecular elements," as the condition underlying such influence, would sound as delightfully theoretic as the modern formulary solution of psychic problems often is.

The conferring of the first prize of Moscow on M. Henri Dunant was a most graceful tribute to a man who has so well deserved of humanity, and comes at a most opportune moment, for it is generally understood that the founder of the Red Cross Society has been in needy circumstances for some time. The honor is enhanced by the fact that the prize is conferred on him at Professor Virchow's suggestion. The announcement of the selection of M. Dunant as the person on whom the first of the series of Moscow prizes was to be conferred was the signal for acclamations which showed how thoroughly the work he has instituted is appreciated by the medical world.

ST. PETERSBURG, September 3, 1897.

THE fêtes organized for the medical visitors to Moscow ended with the soirée of adieu, given by the doctors of St. Petersburg, at the Nobles' Club, on the evening of August 30th. Those of us who remained in the capital of all the Russias for a day or two longer found that Russian hospitality was not at an end just because the

regular program had been finished. Medical visitors to the hospitals, to the clinics, to the laboratories, even to the public museums, libraries, the palace, etc., were as warmly welcomed as during the three days when such visits formed part of the regular routine, and all this was done, though at the same time in St. Petersburg there was being held the International Congress of Geologists, to the members of which the special privileges of guests of the city were accorded, and who were most enthusiastic in their praise of their Russian hosts.

The medical institutions of St. Petersburg are well worth a visit, for their internal arrangements, as a rule, are regulated by the best principles of modern hospital hygiene and the requirements of modern surgery. They have not the advantage that is so striking to the visitors in Moscow of perfectly new buildings where every requirement was foreseen in the construction, but they have in every case obviated the inconveniences and disadvantages of the older buildings in a way to call forth the admiration of the visitor in every department. The attention to details in the management seems to be admirable. After the perfect way in which the General Medical Committee succeeded in handling the immense crowd that came to the Congress—a much larger number than attended previous congresses and almost unexpected—the visitor has had brought home to him the fact that Russian medical men are not lacking in administrative ability, and he is not surprised to find their hospitals admirably managed.

The medical institution of St. Petersburg, however, which perhaps is best worth a visit, is The Imperial Institute of Experimental Medicine. There is nothing elsewhere in Europe that is quite like it, for it contains departments for the study of both human and animal diseases (at least for rabies), and is also provided with a clinical department where patients are taken care of and given the Pasteur treatment. If the Pasteur Institute at Paris, and the Veterinary Institute at Alfort, were united, then France would have an institution such as the one at St. Petersburg. Situated on the shore of one of the islands in the Neva, on large and magnificent grounds presented by Prince Oldenburg, there is plenty of room for the many already existent departments and those in contemplation. With the largest branch of the Neva, the greater Nevsky, flowing close by, the Institute is admirably situated scenically and as regards its water supply. All the departments necessary for the study of experimental medicine are thoroughly equipped. Chemistry, physiology, physiologic chemistry, pathologic anatomy, bacteriology, and serum-therapy—each has its place. The animals intended for experimentation are well cared for, their kennels being planned with an eye to thorough cleanliness, and are light, airy, and roomy. The facilities for the transportation of animals in cars and on elevators are calculated to eliminate the unpleasant scenes sometimes connected with the moving of animals for experimental purposes. The precautions taken against the spread of such diseases as Indian plague and rinderpest during the course of experiments are most complete and include hot ovens with powerful draught in each, in separate compartments of which all parts of affected animals are completely destroyed. The operation-, bathing-, and disinfection-rooms, for animal experimentation are as complete as the nicest details of antiseptic surgery require. The mechanical and scientific apparatus in use in the laboratories are of the latest and most perfect pattern. The whole institution has been planned and equipped for the carrying out of the very best and most advanced scientific work in all branches of experimental medicine.

No wonder that the journal of the Institute, which is published in Russian and French at times during the year when a sufficient amount of matter is at hand, should attract general attention in the scientific world, and should be one of the journals oftenest quoted in experimental medicine. No wonder, too, that the work of the directors of the various departments should be considered as of great scientific value and be carefully looked for by those who are sedulously watching the forefront of medical advance along various lines. All in all, the Western visitor to Russia has, I think, obtained very different ideas as to the medical situation in the East of Europe from those with which he came. To all of us the magnificent university clinics at Moscow came in the light of a surprise. No one unacquainted with the actual condition of affairs could have imagined for a moment that the finest set of hospital buildings in the world, covering acres of ground, almost all absolutely new, models of architectural beauty, was to be found a way off in the center of Russia; but the Western visitor came and was convinced. The idea that the effete East was no longer productive vanished before the persuasion that there were elements of stirring youthfulness, with outspoken promise of further development in all this that must be reckoned with in the evolution of science in the very near future. If the Westerner had heard during his trip through Germany and Austria some echoes of the contest between Germans and Slavs where the two races come in contact, as at Prague, it was only to think that the attempt to raise a Slavic people and Slavic tongue in the midst of Teutonic culture could only end in signal failure. But here everything bespoke the Slav, and there came the realization of the wonderful latent powers just ripe for development that exist in this illy understood people of Eastern Europe. The Slavs themselves claim that the future is theirs. Roman, Celtic, and Teutonic civilization, culture, and literature have had their apogee. The genius of the people has exhausted itself in the effort and now must make room for a new people whose development is yet to come. All of this of course sounds like the vainest boasting of over-enthusiastic patriotism to the stolid Westerner confident in his position at the head of the race, but it must have seemed just as improbable to the old Latins that they should be succeeded by Teuton and Gaul, and Hun and Goth, in the sovereignity of the world. The present generation will not see the rise of the new race, but if we are to judge of the future by what is to be seen in the present the evolution may be confidently committed, should the time ever come for it, to the Slavs of the East of Europe.

Another Eastern race attracted some attention at the

Congress when the delegate from the Japanese Government asked that in 1903 the Fourteenth Congress be held at Tokio, in Japan. The proposal was the source of not a little merriment, for even to the thousands of medical men who had traveled as far as Moscow to an international medical congress, it scarcely seemed serious. A talk with the Japanese representative showed, however, that the request was made in all seriousness, and that even details of the arrangements necessary had been thought out. It is considered highly probable, by those in a position to know, that the Japanese Government would charter a sufficient number of vessels on which at government expense all foreign members of the Congress would be transported free of charge to Tokio. As to arrangements in Japan itself ample guarantee is given that the reception would be a most cordial one, and that the guests of the nation would be given a chance to appreciate thoroughly Japanese hospitality.

OUR PHILADELPHIA LETTER.

[From our Special Correspondent.]

MEETING OF THE AMERICAN ELECTROTHERAPEUTIC ASSOCIATION IN HARRISBURG — PHILADELPHIA COUNTY MEDICAL SOCIETY — PATHOLOGICAL SOCIETY OF PHILADELPHIA—ADDITIONS TO THE FACULTY OF THE MEDICO-CHIRURGICAL COLLEGE—DR. CHARLES W. BURR—DR. WILLIAM G. SPILLER—DR. H. AUGUSTUS WILSON—VITAL STATISTICS FOR THE WEEK ENDING SEPTEMBER 25TH.

PHILADELPHIA, September 25, 1897.

THE seventh annual meeting of the American Electrotherapeutic Association was held in Harrisburg, at the Academy of Medicine, on September 21st, 22d, and 23d. A large attendance was evidenced, and many new and interesting electrotherapeutic instruments and appliances were shown. Papers were read by Drs. G. Betton Massey of Philadelphia, Robert Newman of New York, E. R. Corson and R. J. Nunn of Savannah, F. B. Bishop of Washington, Lucy Brown-Hall and Margaret A. Cleaves of Brooklyn, and by G. E. Bill, W. T. Bishop, and J. Z. Gerhard of Harrisburg. The important question of electric meters was thoroughly discussed on the first day of the meeting, and the application of an efficient instrument for the control of the current was held to be the only reliable agent guiding the scientific application of electricity in therapeutics. A reception by Governor Hastings was tendered the Association on the evening of the second day of the meeting.

At the last meeting of the Philadelphia County Medical Society, held on September 22d, Dr. Edward Martin read a valuable communication on the subject of "The Operative Treatment of Goiter." After having given careful consideration to therapeutic measures other than operative intervention in the treatment of this condition, and having shown the uses and limitations of such procedures as the use of thyroid extract, galvano-puncture, and the injection into the goitrous mass of iodin and iodoform emulsion, the speaker went on to describe the operative treatment which he had employed in the series of cases, seven in number, which formed the basis of his report. The operation was essentially that recommended by Kocher, preference being given to a transverse incision over the growth, although in a tumor extending down into the chest, a larger angular incision was deemed necessary. The patients operated upon by Dr. Martin were exhibited before the Society at the close of the reading of his paper, and conclusively demonstrated the tenability of the speaker's argument in favor of this operative measure. In none of the cases was the scar unsightly, in but one had the operation been attended with noteworthy complication, and in all either complete cure or marked improvement in the nervous and other phenomena had resulted. Dr. John B. Roberts remarked upon the rarity of operations for goiter in this city, a fact emphasized by Dr. Martin, and deplored that the laity misapprehended the seriousness of the operation and magnified the danger attending it. He reported also a number of cases with results similar to those of Dr. Martin, Dr. Roland G. Curtin expressed the opinion that in Graves' disease the operation indicated in simple cystic goiter was uncalled for, and might even prove detrimental, and related a case in which, after the injection of ergotin, the goiter suppurated and disappeared. Dr. A. A. Eshner maintained that all forms of goiter, whether simple or exophthalmic, presented similar indications for operative interference, and thought that in the latter condition it was justifiable to remove the gland for therapeutic purposes. Dr. G. G. Davis also spoke in favor of the operative treatment of the disease, and discussed the mortality and the risks of such treatment. The President of the Society, Dr. James Tyson, in discussing the treatment of goiter from the standpoint of the physician, remarked that his personal experience in the medical treatment of the condition had not been encouraging.

At a stated meeting of the Pathological Society of Philadelphia, held on September 23d, Dr. David Riesman reported a case of carcinoma of the gall-bladder and liver, in which partial involvement of the stomach and pancreas was also present. During the discussion of this paper an interesting point was brought out concerning the value of albumin percentage of fluids withdrawn from the abdominal cavity for diagnostic purposes, and it was shown that in no single disease accompanied by a collection of fluid in the abdomen, was the richness of such fluid in albumin indicative of the nature of the lesion. Dr. Joseph McFarland read a paper on the coccidium oviforme, and demonstrated the gross pathology and the microscopic characteristics of this condition.

The faculty of the Medico-Chirurgical College has been augmented by the addition of four new professors, who will enter upon their duties with the opening of the winter term of this institution, on October 4th. The newly elected teachers are Dr. Charles E. de M. Sajous, whose election to the chair of laryngology was announced early in the summer, Dr. Louis Rodman, who has left the professorship of operative surgery in the Kentucky School of Medicine to accept the chair of surgery, Dr. John C. Heisler, professor of anatomy, and George S. Meeker, B.S., professor of chemistry.

A chair of neuropathology having been created at the Philadelphia Polyclinic, Dr. Charles W. Burr has been

elected to the professorship in this branch. It is also announced that Dr. W. G. Spiller has been elected professor of diseases of the nervous system in the same institution, Another change at the Polyclinic is the resignation from the faculty of Dr. H. Augustus Wilson, who for many years has occupied the chair of orthopedic surgery, and was one of the founders of the school.

The total number of deaths in Philadelphia for the week ending September 25th was 352, a decrease of 9 from the preceding week, and an increase of 3 over the corresponding week last year. Of the total number of deaths reported 122 were in children under five years of age. Of contagious diseases 178 cases were reported, with 22 deaths, as follows: diphtheria, 77 cases, 13 deaths; scarlet fever, 43 cases, 2 deaths; enteric fever, 58 cases, 7 deaths.

SOCIETY PROCEEDINGS.

NORTHWESTERN MEDICAL AND SURGICAL SOCIETY OF NEW YORK.

The President, Charles L. Dana, M.D., in the Chair.

SYPHILITIC INFECTION OCCURRING TWICE IN THE SAME LOCALITY.

Dr. Joseph Collins narrated the history of a case, which was of interest because of its rarity. The patient, a physician, came to him three or four years ago complaining of pain in the middle finger, which he thought was caused by a hangnail. A diagnosis of Huntarian chancre was at once made, and, in due course of time, the secondary manifestations appeared. He was put upon mercury during a period of about two years, which he tolerated very well. This was stopped for three or four months and the iodid of potassium given, which was not well tolerated, iodid inebriation being manifested throughout the vascular system, and also by eruptions. He was then given four or five ounces of sherry wine each day with the iodid, with the result that the latter was well borne. During the past summer, he worked hard during the hot weather, and began to suffer from attacks which seemed to be due to some disturbance of the vascular system. There was numbness of the right hand, arm, and leg, and also a number of symptoms which seemed to resemble the hemiplegic variety of vascular neurasthenia. This was accompanied by a great deal of mental depression, and he was placed upon vasomotor stimulants.

About two months ago the patient came to him complaining that something was the matter with the finger which had formerly been the seat of the chancre. There was pain and swelling, and the finger had the appearance of being about to fester. A diagnosis of tuberculous syphilide was made and he was placed upon a tonic treatment, together with iodid of potassium, until the lesion disappeared.

Dr. A. R. Robinson said that several similar cases had been mentioned by Hutchinson, who called it recurring chancre, in which the secondary manifestations showed themselves years after the first. He saw no reason why such secondary infection should not occur, although he had never seen such a case.

Dr. Collins replied that in this instance the lesion did not have the appearance of a recurring chancre, it was not greatly indurated, not soft, there was no solution of continuity, and no history of specific infection. It looked more like a bursitis in the beginning.

Dr. H. S. Dessau referred to the use of cocoa wine in combination with iodid of potassium, and said that the result was the same as that which followed the use of sherry wine in Dr. Collins' case. He thought it a valuable aid in the treatment of syphilis, especially where the patient did not respond well to the drug.

The President said that the administration of ten drops of the tincture of belladonna, three times a day, together with the iodid of potassium, often produced a good effect.

LUPUS OF THE SCROTUM.

Dr. Charles H. Knight related the case of a child, aged seven months, who was brought to the German Hospital. When the child was one month old, a nodule appeared on the upper segment of the left side of the scrotum, and since then four others had formed in the cutis. There was no involvement of the deeper tissues. Dr. Jacobi removed the nodules, after which a red streak appeared along the penis and glans and a lymphangitis developed, due to secondary infection. None of the glands was involved. The specimen had the gross appearance of lupus and was now being examined by Dr. Prudden. According to Dr. Jacobi, lupus is very rare in young children.

Dr. Robinson thought there must be some doubt as to the correctness of the diagnosis. In the case under discussion the course of the disease was more acute than that of lupus, and he thought in all probability it was one of lymphangitis.

The paper of the evening, entitled

THE PRESENT STATUS OF ORTHOPEDICS,

was then read by Dr. H. L. Taylor. (See page 424.)

DISCUSSION.

Dr. Robert Newman spoke of the difficulty in obtaining a properly constructed and sensible shoe for children, most shoemakers making them so narrow and small that they will not fit any foot. He thought the extensive use of gymnastic exercises, as advocated by Dr. Taylor, a very important point in treatment. It is beneficial in all cases and results in correction of the deformity in some instances. He referred to cases of partial fracture of the coccyx, and expressed the opinion that the treatment of such injuries should belong to orthopedics.

Dr. L. Duncan Bulkley referred to two cases of "orthopedic neurasthenia" which had come under his observation. The first was that of a woman, forty-five years of age, who practically had been bed-ridden during six months and was under the care of a gynecologist. She was treated by hydrotherapy and muscle exercise, and

in six months was so well that she began to ride a bicycle. The second patient was a woman who had sustained some injury of the spine by the falling of an elevator and was suffering from traumatic neuritis. She had been wearing some form of jacket or support. This was removed and she was treated in the same manner as the other patient, with the result that she was entirely cured and able to return to her duties as nurse.

DR. S. N. LEO said that he heartily approved of Dr. Taylor's admirable paper. He thought the enormous immigration to this country is responsible for most of the rachitic children who are brought to hospitals and dispensaries to be relieved of deformities. The majority of these cases occur among Italians, who live in over-populated quarters of the city and are always ill-fed. He also thought that the hard benches, and the cramped and faulty position which children are obliged to maintain while in school have much to do with the development of orthopedic diseases.

DR. JOHN F. ERDMANN asked the author of the paper if he had ever seen sloughing follow the use of Bradford's adjuster. He could easily see how this might occur over bony prominences where pressure was brought to bear. He also asked if he had ever employed injections of chlorid of zinc in congenital dislocation of the hip; also, if in using the Bradford genuclast, there was not danger of rupturing the popliteal artery, and referred to a case in which this had been done by manual correction. He also wished to know whether the author had ever employed Dr. Frederick McGuire's method of treating ankylosis by excessive temperature.

DR. JOSEPH COLLINS said that he had seen many cases in which the lack of proper orthopedic treatment at an early stage was very evident. Everyone would agree that after the acute phenomena in anterior poliomyelitis has subsided, a certain amount of benefit could be obtained by the proper employment of electricity, massage and hygienic measures; but there is one point which was not sufficiently recognized by the general practitioner, and that is that these measures must be employed early. He was surprised to hear Dr. Taylor speak favorably of tendon-grafting in anterior poliomyelitis, as the results which he had seen follow this method of treatment had not been good. He thought the subject of lateral curvature a very important one, and was of the opinion that it is due to an original defect in the tissues from which muscle and connective tissue are formed. He did not think that cases of neurasthenia accompanied by irritable spine or any of the traumatic neuroses should be discussed in a paper on orthopedic surgery, as such cases rarely require the attention of the orthopedic surgeon.

DR. DESSAU said that the subject covered by the paper was very broad, and, while the author had handled it from the standpoint of the specialist, he showed very plainly the necessity of the specialist being familiar with the entire field of medicine. He appreciated more than anything else the stress which had been laid upon hygienic measures, which he considered an important point, as unhygienic environment is an important factor in the causation of rachitis.

THE PRESIDENT said that he was surprised that nothing had been said about the use of the bicycle, and was curious to know if any injurious effect is produced by the faulty attitude in which boys usually ride. He did not agree with those who thought that braces or some form of jacket is not necessary in cases of spinal irritation, for he had known of cases in which an apparatus of this kind gave great comfort.

DR. TAYLOR, in closing, thanked the members for the attention they had given his paper, which was a difficult one to discuss in a general society, for the reason that it necessarily had been very much condensed. He had intended to give an outline of the orthopedic science and art at the present time, and he trusted that the paper has not seemed too dogmatic.

Fracture of the coccyx, mentioned by Dr. Newman, is a very painful affection, which requires appropriate treatment, but he did not consider it strictly orthopedic. Dr. Fruitnight had mentioned heavy gymnastics for lateral curvature. At present this is in the experimental stage. The bad sanitary condition of many school-rooms and the prevalence of rachitic diseases among the foreign population had been mentioned. It is a fact that a large proportion of these cases in New York occur among the children of the Russian and Polish Jews and Italians, and there are two reasons for this—their ignorance and their cupidity. They are ignorant as to what constitutes proper nourishment, frequently allowing their children to nurse until two or three years of age, and then feeding them largely on tea, coffee, and cake. Their cupidity is manifested by their saving out of their meager earnings, at the expense of nourishing food. He thought the whole subject of school sanitation and the health of the pupils should be seriously treated.

In regard to sloughing as a result of the use of the Bradford apparatus, he said this is possible, but it is rare when the technic of the operation is well understood. He had had no experience with injections of chlorid of zinc in congenital dislocation of the hip. In regard to heat and electricity in the treatment of ankylosis, good results have been obtained from both, and much is to be hoped from the development of these methods of treatment. The disabilities following multiple neurititis resemble those resulting from infantile paralysis, and similar treatment is required. He had felt justified in speaking hopefully of tendon-grafting from the reports of Goldthwaite and others.

Dr. Collins' remark about lateral curvature had interested him very much. It was the habit to attribute the commoner forms of lateral curvature to muscular weakness and habitual faulty attitude. These explanations have never satisfied him, nor has any explanation which has as yet been brought forward. In regard to bicycle riding, he, of course, did not approve of the doubled-up attitude, but had never known of particular cases of injury from it. Morton's disease sometimes bothers orthopedists as well as neurologists. The treatment indicated is to so adjust the shoe as to remove pressure from the heads of the metacarpal bones. In obstinate cases, the inflamed nerve-filaments should be excised.

REVIEWS.

A System of Practical Therapeutics. Edited by Hobart Amory Hare, M.D., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia; Physician to the Jefferson Medical College Hospital. Vol. IV. With illustrations. Philadelphia and New York: Lea Brothers & Co., 1897.

The enormous strides made by therapeutics during the past five years has induced the editor of this well-known "system" to add a fourth volume to the work. In the selection of his contributors he has displayed mature and careful judgment, and the result is a series of most excellent papers and monographs embodying much that has been accomplished in this field during late years.

The introductory chapter on "Recent Advances in Hydrotherapy" by Dr. Simon Baruch is a clear *résumé* of the various applications of water in disease, and furnishes a very satisfactory supplement to the author's article in Vol. I. Of Dr. S. Edwin Solly's article on "The Present Treatment of Tuberculosis," we need only mention that it is fully in accord with the accepted modern views of the subject, and is based largely upon original work. Dr. Edward Martin's chapter on "The Present Treatment of Syphilis" is a very satisfactory one. The author rightly says that absolute reliance cannot be placed on Keyes' method of gauging the dose of mercury; however, he commends the procedure as an excellent one. Dr. J. M. Anders has written on "Typhoid Fever and Malarial Diseases," and the subject is treated in a clear and scholarly manner. It is not generally known that a one-fifth-per-cent. solution of mercuric chlorid requires six hours to thoroughly disinfect typhoid stools, and that twenty-four hours is required by a five-per-cent. solution of carbolic acid. The urine should be treated in the same manner, as typhoid bacilli have been repeatedly found in this secretion. Among the hypnotics used in typhoid fever we are somewhat surprised not to find trional mentioned.

In Dr. Hare's article on "Influenza," the affection is described as "arising as the result of infection by some agent as yet not discovered." The omission of Pfeiffer's bacillus is also noted in the chapter by Inglas on "Nasal Affections." We are convinced that this is a simple, careless oversight. Dr. Hare has also written the chapters on "Scarlet Fever and Meazles," "Diabetes Mellitus," and "The Intestinal Parasites."

The articles are somewhat short but fully satisfactory. Dr. E. Fletcher Ingals' discussion of "Diseases of the Nasal Chambers and Associated Affections," is fully what we would expect from the author's previous writings on this subject, and the article is well illustrated. The chapter on "Diseases of the Uvula, Pharynx, and Larynx" by Dr. S. Braden Hyle, gives in brief compass the various therapeutic measures used in these diabetes. Dr. William H. Park in the chapter on "New Facts and Methods in the Treatment of Diphtheria" contributes many valuable tables of statistics of the antitoxin treatment in New York City, and gives a clear *résumé* of the methods used. "Asthma, Bronchitis, and Whooping-cough" receives full and systematic consideration by Dr. Norman Bridge.

Dr. A. J. McCosh's discussion on "Pleural Effusion and Empyema; Abscess and Gangrene of the Lung" is exhaustive and scholarly, and a very satisfactory consideration of the etiology of these diseases is given. All directions for the surgical treatment are clearly detailed. Dr. James B. Herrick contributes the chapter on "Pneumonia, Croupous and Catarrhal, and Pleurisy" and presents the subject in a clear and straightforward manner, mentioning the various "specifics" which have been advocated in pneumonia. The chapter on "Diseases of the Heart" by Dr. Frederick P. Henry fairly covers the ground. The Schott treatment is fully described. "Diseases of the Blood" by Dr. Ralph Stockman covers less than twenty pages and is supplementary to Shattuck's article in Vol. II. The etiology and pathology are well discussed, and the author gives references to several of his recent writings on the subject. Dr. Joseph Eichberg has written on "Diseases of the Liver," and although most of the pathologic conditions affecting the liver receive separate headings, the chapter is not entirely satisfactory.

"Diseases of the Thyroid and Thymus Glands, Myxedema, Cretinism, Graves' Disease, and Obesity" is the title of Dr. S. Meltzer's contribution, and it gives evidence of an intimate acquaintance with the literature on the subject and of a large personal experience. The ground is well covered, and most of the recent views as to the etiology of these diseases are given. In the chapter on "Diseases of the Stomach" by Dr. Thomas G. Ashton, we believe that too much weight is given to the influence of electricity in the treatment of chronic gastritis and dilatation of the stomach. The use of methyl-blue in the treatment of cancer of the stomach is mentioned, but methylene blue is undoubtedly the drug referred to. Dr. George R. Fowler has written on "Peritonitis, Non-operative and Post-operative, Appendicitis, Paratyphilitic Abscess, and Obstruction of the Bowels." His classification of the various forms of peritonitis is not at all satisfactory. In discussing perforative peritonitis, the author says: "In this variety the infection has its origin in the intestinal canal," The perforation of any abdominal or pelvic abscess may cause this form of peritonitis, but the etiologic factors together with several others are all classed under the general term "infectious peritonitis." The other forms mentioned are, "symptomatic peritonitis," "tubercular peritonitis," and "undetermined infections."

The chapter on "Diseases of the Rectum and Anus" by Dr. Joseph M. Matthews gives in a practical way the usual means for dealing with the affections. Dr. W. W. Johnston discusses "Diarrheal Diseases and Dysentery" in a most satisfactory manner, and all the most recent methods of treatment are enumerated. "The Modern Treatment of Diseases of the Skin" is by Dr. H. W. Stelwagon, who has briefly described some of the rarer skin diseases not mentioned in Vol. III., in addition to the modern treatment of the more common forms. A most satisfactory chapter is that on "Spasmodic Affections of the Nervous System" by Dr. Joseph Collins. The author advises larger doses of exalgin in chorea, especially in very acute cases, but liberal doses of iron should be

administered at the same time. Arsenic, however, is advocated in all cases, but extremely large doses are not necessary. The author's condemnation of operations on the generative organs for the cure of hysteria meets with our approval. Following this is an excellent chapter on "The Drug Habits" by Dr. F. X. Dercum. A valuable and most interesting article on "The Disorders of Sleep" is contributed by Dr. Hugh T. Patrick, and the value of hydrotherapy as a hypnotic procedure is fully appreciated.

The remaining articles are the "Therapeutics of Renal Diseases" by Dr. Nathan S. Davis, Jr.; "Therapeutics of the Genito-urinary Diseases of Women" by Dr. Edward E. Montgomery; "Therapeutics of the Male Genito-urinary Tract" by Dr. William T. Belfield; "Diseases of the Eye and their Treatment by the General Practitioner" by Dr. Casey A. Wood; and "Diseases of the Ear, and their Treatment by the General Practitioner" by D. S. Maccuen Smith. Space does not admit our reviewing these chapters in detail, but we have read them all with interest and profit.

All in all, the volume before us contains a wealth of valuable information and is one deserving of highest commendation. We congratulate the editor and the makers of the book for an extremely satisfactory modern work on practical therapeutics. The volume forms an excellent complement to those already published and gives the work a completeness, which if it did not demand, is exceedingly satisfactory nevertheless.

TWENTIETH CENTURY PRACTICE. BY LEADING AUTHORITIES OF EUROPE AND AMERICA. Edited by THOMAS L. STEDMAN, M.D. In twenty volumes. —Volume IX., Diseases of the Digestive Organs. New York: Wm. Wood & Co., 1897.

JOHANN MIKULICZ and Werner Kümmel open the ninth volume with a description of the local diseases of the mouth, including those of the lips, gums, and cheeks. Especially to be recommended is the description of the diseases of the tongue.

In the section devoted to the diseases of the intestines, Ewald gives an excellent account of the treatment of habitual constipation. The article on appendicitis and perityphlitis is well worth the reading. We looked in vain, however, for a systematic classification of the varieties of appendicitis, and we find practically no mention of the gangrenous form of that disease.

Virgil P. Gibney and J. B. Walker of New York contribute a well-written and well-illustrated article on hernia and its treatment. The section devoted to diseases of the spleen comes from the pen of Dr. Alfred Stengar of Chicago. Professor Semmola and Dr. Geoffredi write on the diseases of the liver. The authors give an admirable account of the physiology of the liver and the general symptomatology of hepatic diseases.

The article by Murphy of Chicago is a comprehensive, yet concise description of the symptoms and treatment of diseases of the gall-bladder. The section on "Movable Kidney," by Kendal Franks, seems to us to be out of place in a volume devoted to the "Diseases of the Digestive Organs." We cannot understand why it was inserted in this volume. The paper, however, is well written and well illustrated. The author makes a clear distinction between floating and movable kidney; the former always being congenital. The author gives a very satisfactory explanation of the infrequency with which movable kidney is found at the *post-mortem* table.

THERAPEUTIC HINTS.

The Treatment of Common Colds.—BLONDEL (*Revue de Ther.*, August 1, 1897) recommends the following treatment for acute bronchotrachaeitis.

1. In the beginning, and only in the beginning, of the illness:

℞	Tincture of aconite root	. .	15 drops
	Tincture of ipecac.	. . .	2.5 drams
	Menthol, Saccharin } aa	. . .	1.2 grains
	Alcohol	. . . . .	10 drams
	Syrup of tolu	. . . .	4 ounces.

Two or three teaspoonfuls of this mixture are to be taken at intervals of one hour after the two principal meals of the day.

2. For the coryza one may use a powder composed of equal parts of biborate of soda, alumnol, and powdered sugar.

3. If the treatment is undertaken later two teaspoonfuls of the following mixture may be taken every two hours:

℞	Tincture of aconite root	. .	15 drops
	Antipyrin	. . . .	30 grains
	Syrup of codein	. . .	3 drams
	Syrup of polygala	. . .	5 drams
	Syrup of tolu	. . . .	1 ounce
	Syrup of cherry laurel	. .	13 drams.

4. For the final period, that of expectoration, etc., turpentine, creosote, or guaiacol, may be given in capsules after each meal.

Pills for the Treatment of Sciatica.—

℞	Pulv. opii, Pulv. ipecacuanhæ } aa	. . .	gr. xv
	Sodii salicilat.	. . . . .	3 iss
	Ext. cascaræ segrad.	. . . .	q.s.ad.

M. Ft. pil. No. xx. Sig. One to three pills daily.—*Richardson.*

For Acne Rosacea.—In the local treatment of the first grade of acne rosacea, Van Harlingen reports rapid results from the application, several times daily, of a lotion composed as follows:

℞	Sulphuris precip.	. . . .	3 i
	Pulv. camphoræ	. . . .	gr. v
	Pulv. tragacanth	. . . .	gr. x
	Aq. calcis, Aq. rosæ } aa	. . . .	f ℥ i.

M. Sig. Apply night and morning.

For Pruritus Vulvæ.—One of the best preparations in the treatment of this affection is the following:

℞	Zinci oxidi	. . . . .	3 vi
	Acid. salicylici	. . . . .	gr. xv
	Glycerini	. . . . .	3 vi.

M. Sig. Apply at frequent intervals.